

WHERE OUR WAYS OF LIVING COME FROM




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Gendreau

RADIO CITY, a group of buildings in the city of New York. From the skyscraper, radio programs are broadcast. How do buildings help to make our ways of living?

OUR WAYS OF LIVING

Where Our Ways of Living Come From

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Foreword

Where Our Ways of Living Come From is the second volume in a series of books in social studies for four years of the elementary school. The books present carefully selected and organized materials which may serve as the core of the social-studies curriculum; or as "social cement" to bind together and vitalize the customary courses in history, geography, and citizenship. In the series, the authors have sought to avoid the repetitions and omissions in many traditional courses of study; they have sought to provide a foundation for the development of a well-articulated and significant curriculum in the social studies.

The title and the central topic of the series is *Our Ways of Living*, and the four volumes cumulatively build up this central theme. The first volume introduces pupils to the concept of variation in ways of living, through a series of units showing *Ways of Living in Many Lands*. The second volume presents basic elements of history, geography, and civics in a series of units on *Where Our Ways of Living Come From*. The third volume analyzes basic characteristics of modern life through materials on *Living in the Age of Machines*. The fourth volume presents aspects of mankind's aspirations and achievements in the arts and sciences, making possible *Richer Ways of Living*.

The series is unified by its organization around a central, cumulative theme. And not only does its controlled articulation embrace the elementary school; the materials for these years are planned in relation to the materials that pupils will study in the junior and senior high schools. The authors have envisaged the social-studies curriculum from the earliest grades to graduation as a steady unfolding of the story of human affairs. This series is a planned whole in its own right and at the same time is a strong foundation for the continuance of social education.

A second feature of the books is their wide range of social content. They present the best materials from the traditional courses of study, but omit considerable old material which has been conspicuous for its lack of value or of meaning for pupils. In its place will be found materials from the newer researches of history, geography, and government, and from the newer social sciences of economics and sociology. Among the innovations of content are: a discussion of group life and citizenship; material on language as a social institution; a unified study of automobile, railroad, water, and air routes of the world; material on the harnessing of power and the search for still better ways of harnessing it; the effects of industrial life on communities and on individuals; the story of human friendliness; the significance of the rise of public libraries, museums, and schools; the social effects of the rise of science; the wise use of natural resources; and government as a social process rather than a political framework.

Although the traditional labels and organization of materials are not extensively used in the series, the pupil is introduced to basic elements in the broad social heritage. The books incorporate significant and typical materials from the full range of human history, from the story of our national development, from the great areas of human geography, and from the complicated processes of ordinary group living. The content of the books is intentionally representative of that extraordinarily broad field which has been well called "the seamless web of human experience."

Ideas and social insights and skills, as distinguished from "raw information," constitute the real objectives of social-studies teaching, and these books are organized to help attain these objectives. In spite of the breadth of content of the books, they are not mere collections of far-flung facts. The books are built on the principles of *direct teaching*, with all the content focused on the objectives to be attained.

Each book of the series contains six units. These units are not merely mechanical subdivisions of the books, but are care-

fully and critically constructed. *A unit is a body of subject matter, plus an implementing group of learning-activities, every detail of which is focused on a central cluster of ideas.* The understanding of these ideas, which are sometimes referred to as concepts or generalizations, is the primary objective of social-studies instruction; the subject matter of the units and the suggested pupil-activities have been selected and organized on the basis of their direct relation to these ideas. Non-pertinent information and activities have been excluded.

Each unit is presented as a series of short, dramatic stories. Most of these stories present concrete and vivid details of information which *are illustrative* of the major ideas of the unit. Each small group of stories leads up to a generalization, and this generalization or concept is then explicitly stated in a very brief generalizing story (the title of which is printed in *Italic* type in the table of Contents of the book). These generalizing stories formulate the ideas which the preceding stories have equipped pupils to understand. The progression of stories through the unit leads to a final generalizing story in which the cluster of ideas of the unit is again emphasized.

The arrangement of the units reflects the intimate relation between subject matter to be studied and pupil-activities through which it is studied. The study activities suggested in connection with each unit are selected to emphasize the relationships existing among the stories and to focus on the idea-objectives. The study activities are also designed to give pupils training in the skills of study and of intellectual operation and social participation without mastery of which they cannot function as constructive members of society.

Books, no matter how well constructed in terms of educational objectives, must be of challenging interest to pupils if they are to be psychologically effective. The authors of this series regard the unit organization as described above, as psychologically sound. To enhance the interest of the books they have, in addition to this organization, sought to control and develop pupils' vocabulary, not alone by restricting the

choice of words used but also by careful and functional explanation and controlled repetition of basic social-studies terms. Much attention has been given to grammatical simplicity, and even more to an effective style of writing. The material is presented in concrete rather than abstract "textual" terms. Boys and girls and their activities, of the past and of the present, have been introduced into the books; words and pictures have been integrated. The authors have not "written adult material down for children" but have written directly for boys and girls. They have tried to live up to the advice of a wise elementary-school teacher who said to them, "Write every story as if the children themselves were to live it!"

The books are the work of a group of people co-operating closely over a period of years. All the authors and collaborators participated in the planning and writing of the stories; the result is a unified variety of approaches and treatment reflecting the wide background and teaching experience of the whole group. During the years in which they have worked there have appeared the report of the American Historical Association's Commission on the Social Studies in the Schools, the *Fourteenth Yearbook* of the Department of Superintendence, and various publications of the National Council for the Social Studies. To these reports the authors of *Our Ways of Living* are deeply indebted for guidance. No less is their obligation to the many school systems which have produced elementary-school courses of study in social studies in recent years. These books have drawn heavily upon the experiences embodied in those curriculum-bulletins, as well as upon the co-operation and insight of classroom teachers and supervisors. Many sections of the books have been subjected to the test of practical use. To teachers in the school systems of Detroit, Michigan, and of Brookline and Reading, Massachusetts, and to teachers who have participated in courses on the social-studies curriculum at the Harvard Graduate School of Education, the obligation of gratitude is very great.

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To the Boys and Girls

In this book you will find many stories about interesting things. You may read about the visits of Jane and Peter to History Hill. You may read the story of how the earth began, and what the longest river in the world might say to you if it could talk. You may read about things that Jane and Peter did in Miss Tyler's class in school. You may read about a boy who saw the first reaper cut grain. You may learn about the first boats and wagons, how axes were first made, how people learned to weave cloth, and how the alphabet started.

These stories are interesting, and you will enjoy reading them. The important thing about the stories, however, is that they will give you new ideas. The stories tell when and where your ways of living began. Some of the stories are history. Some are geography. Some are citizenship stories. We call them all "social studies" stories. Every one of the stories you read will make it easier for you to understand why you live the way you do today.

The stories in this book are arranged in six groups. Each group of stories is called a *unit*. The first unit, or set of stories, tells about the past, partly in visits by some make-believe people from long ago. The

things they talk about are true history. The second unit tells about the earth we live on. The third tells about the groups of which we are members. The fourth unit tells about farming long ago and now. The fifth unit tells how people learned to make and to use tools. The stories of the sixth unit, the last in the book, tell how the exchanging of goods and ideas helps to make our ways of living better.

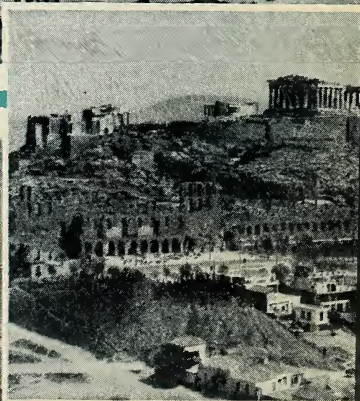
At the end of some of the stories there are things for you to do. You will be told how to make pictures and write stories of your own. Some of the things you can do by yourself. The whole class will work together, or co-operate, on other things. Your teacher will tell you what to do.

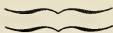
As you read the stories in the book, imagine you are Peter or Jane. See if you can learn as much about "our ways of living" as Jane and Peter learned.

UNIT I



HISTORY HILL





Peter and Jane

Peter and Jane were twins, ten years old. They were spending the summer in the country, on their uncle's farm. They liked to be out of doors. They made friends with two cows, the gentle old horse that ate grass all day long, and the little white dog named Jerry. They even followed the old turkeys around the yard. Each evening they helped their uncle, the farmer, throw corn to the pigs.

The part of the farm they liked best was the apple orchard on the hillside behind the farmhouse. A path led up through the orchard. Many times Jane and Peter followed it up the hill, around the bend, and to the pasture at the very top of the hill. It was a long climb, but when they got to the top they could see far in all directions. They could see the river which was miles and miles away.

Peter and Jane were very glad when their mother came to stay with them a while at their uncle's farm. The next afternoon they took her with them to the top of the hill. They sat down and looked around

Credits: American Museum of Natural History; R. Raftery, N. Y.

The pictures on the opposite page show people and buildings of long ago. Many of our ways of living began thousands of years ago, in far-distant lands.



PETER AND JANE AND MOTHER, at the top of History Hill.

them. They could see men cutting hay in a field far below them. A concrete road ran through the valley, and they could see automobiles moving swiftly along it. They could see farm homes along the road, and the row of poles which carried telephone wires to the houses.

"Oh, look!" Jane said. "There are workmen putting up electric light wires. Soon Aunt Martha and Uncle Mark can have electric lights at their house, instead of oil lamps."

"That will be fine!" said Mother. "Long ago, there were only candles to light houses after dark. Electric lights are much better than candles or oil lamps."

"The way people live today is comfortable, isn't it!" said Peter. "It is much easier to turn on electric lights than to light candles or lamps."

"Yes," said Jane, "and it is much nicer to ride in automobiles than in heavy old wagons."

"In Lapland," said Peter, "people ride on sleds drawn by reindeer. In Arabia (*ā-rā'бі-ā*) the Bedouins (*běd'ōō-īnz*) ride on camels. How does it happen that we have automobiles?"

Peter and Jane and their mother talked on and on about our ways of living. They talked about our homes and schools. They talked of many things we do. We wear warm clothes in winter and cool

clothes in summer. We play basketball, and go skating, and do many other pleasant things. All the things we have and all the things we do are parts of our ways of living!

"I wonder where our ways of living come from," said Jane, suddenly. "Do you know, Mother?"

"Who taught people how to have electric lights?" asked Peter.

"How did people learn to build houses like Uncle Mark's?" said Jane. "And I wonder how people learned to plant orchards! How did they learn to talk and work with one another?"

"It would take a long time to tell you where all our ways of living come from," said Mother. "Our ways of living come in part from the past. I can tell you about some people who lived long ago and who helped to make our ways of living."

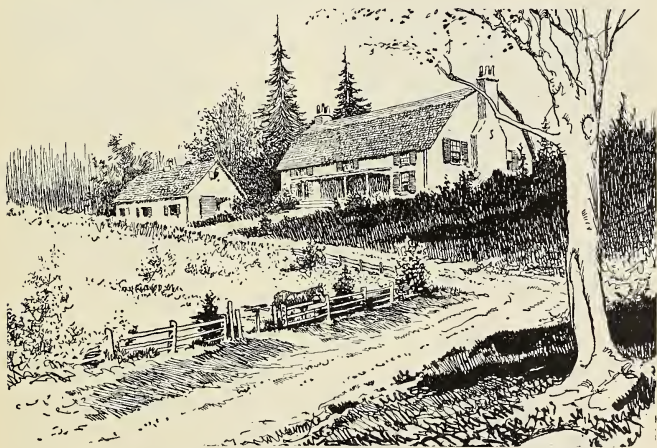
"Please tell us, Mother," said both Peter and Jane quickly.

"All right," Mother agreed. "Imagine that there is coming up the hill a heavy man, with stooped shoulders, bushy hair, and only an animal skin for clothes. He carries a stone ax in his hand. His name is Og. He is a primitive man. If he could talk he might say, 'I can tell you where some of your ways of living come from!' Imagine now that you are going to listen to a story that Og tells."

Making Pictures

It is fun to make pictures to go with the stories you read. Make pictures of Jane and Peter and Mother sitting on the hilltop. Perhaps you will want Og, the make-believe primitive man, in your picture.

Why not make a large picture border for your classroom? Get a large strip of wrapping paper. On it you may draw pictures about the stories in Unit I. Or you may draw pictures on other paper, cut them out, and paste them on the wrapping paper. You will have a frieze, or long row of pictures, to hang on the classroom wall. Make the pictures to go with the stories of Unit I.



This picture shows a farmhouse like Uncle Mark's.

Og's Story



Peter and Jane, on History Hill, are about to hear the story that might be told by a primitive man of long ago.

“Are you ready to hear the story that Og might tell?” asked Mother. “Here it is”:

* * * *

My name is Og, and I lived many, many thousands of years ago. In my time there were no towns or cities anywhere. There were no roads or stores. There were not even any houses. The people who were

living then had to find shelter in caves. They ate nuts and fruit, and the animals they could kill with clubs or stone axes. They made their clothes out of animal skins.

Those early people—now called primitive people—lived very different lives from the life you live, Peter and Jane. They were usually cold in winter. They didn't always have enough food to eat. They were easily frightened. Primitive people were afraid of the dark forests, were frightened by thunder and lightning, and were afraid of wild beasts.

I, Og, am one of those people. I have crept through the forests, fleeing from great beasts. I have hidden in deep caves to keep warm and to get away from danger. I have never had clothes like yours. My only weapon has been this

The pictures on this page show the entrance to a cave; primitive man starting a fire; roasting meat; primitive man's weapons; and a buffalo as painted by primitive men on the wall of a cave.



strong stone ax. And yet I tell you that I and my people started your ways of living.

Yes, indeed, we primitive people started your way of living. Without us and what we did, you could not live the way you do today. We taught you how to make tools. See this stone ax? If my people had not learned how to make tools such as this ax, your people would not have all the things they have today.

My people were the first to make pottery, too. You have fine dishes and beautiful vases because primitive people first learned how to bake clay to make pottery.

The most important thing we did for you, however, was to teach you how to use fire. Do you know that man is the only living creature that is not afraid of fire? My people first learned how to use fire. They were brave enough to make it work for them. Without fire you would not be able to keep warm. Steam engines and steamboats could not run without fire. Factories which make your shoes and clothes have to use fire. Without fire you would not have good, well-cooked food to eat. Fire is one of the most important things in the world. And my primitive people were the first to learn how to use it.

* * * *

“Primitive people were really the first to learn how to make tools, to make pottery, to weave cloth,

and to use fire," said Mother, as she finished telling Og's story. "Primitive people first began our ways of living."

"You don't mean that primitive men made all our ways of living today, do you, Mother?" asked Jane.

"No," was the answer. "I meant only that primitive men started our ways of living. We should not be able to live as we do today if primitive men had not learned how to make tools and pottery and to use fire."

"I should like to know more about primitive times," said Jane.

"We'll come back up the hill tomorrow afternoon," said Mother. "Then I'll tell you about some other people who lived long ago."

Starting a Classroom Museum

Maybe there is a shelf in your schoolroom that you would like to use as your museum while you are learning where our ways of living come from. Of course you will want to make an ax that will look like the one Og carried. Can you make one by tying a stone on a stick handle?

A Picture for the Frieze

Add a picture of Og to your frieze. Be sure to include in your picture the things that primitive man gave to us—the ax, fire, and pottery.

Reading Time

There are many books about the people who have lived before us and helped to make our ways of living. You will want to read some of these books this year. In your schoolroom you probably have books that tell stories about these people. In the public library you will find still more books. Maybe the librarian will let you keep some of the books in your classroom while you are studying "History Hill."

Books about Our Long History:

Andrews, Jane, *Ten Boys Who Lived on the Road from Long Ago to Now.*

Hillyer, V. M., *A Child's History of the World.*

Kiner, Grace, *How the World Grew Up.*

Lansing, Marion F., *Man's Long Climb.*

Scales, L. W., *Boys of the Ages.*

Books about Our Primitive Ancestors:

Dopp, Katharine E., *The Early Cave-Men* and *The Later Cave-Men.*

Erleigh, Eva, *In the Beginning.*

Kummer, F. A., *First Days of Man*, and *First Days of Knowledge.*

McIntyre, M. A., *The Cave Boy.*

Perkins, Lucy Fitch, *The Cave Twins*.

Wells, Margaret E., *How the Present Came from the Past*, Book I.

Talking Time

As you read in books about people who lived before us and helped to make our ways of living, you will find stories that it would be fun to tell to the class. When you tell a story that you have found during your reading time, be sure to tell the class the name of the story and the name of the book in which you found it.

Maybe someone in the class will tell the story of "Umfa-Umfa and Itchy-Scratchy" and "Fire! Fire!! Fire!!!" which you will find on pages 10-15 and 16-19 of *A Child's History of the World*, by V. M. Hillyer.

In *Our Beginnings in the Past*, by D. C. Knowlton and A. J. Gerson, you can find these stories about our primitive ancestors:

"The Men of the Stone Age," pages 63-72.

"The Beginnings of Agriculture," pages 75-84.

"Homes and Clothing," pages 86-94.

In Wells, *How the Present Came from the Past*, Book I, you can find many interesting stories that tell how our primitive ancestors started our ways of living.

Brown Siki

The next afternoon Peter and Jane could hardly wait to get to the top of the hill with their mother. As soon as their work at the farm was done, all three went quickly through the orchard.

"What story are you going to tell us today, Mother?" Peter asked.

"Wait until we get to the top of the hill," said Mother.

When they had reached the top of the hill, they sat down and waited for Mother to begin.



What story will Jane and Peter hear next? What things in the picture on the right show you that Siki came from Egypt?

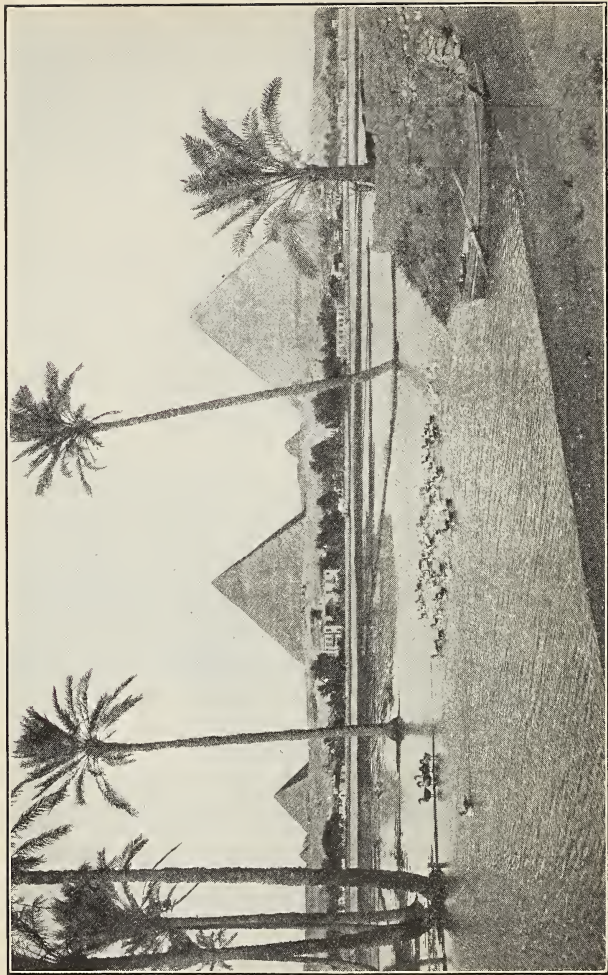
“Today, imagine that we have a visitor named Siki” (sē’kē), said Mother. “His skin is brown. He is thin and wiry. He wears a loin cloth, a large bright-colored robe, and a cloth over his head to protect him from the sun. This is the story he tells”:

* * * * .

Yesterday Og told you how his primitive people first learned how to use fire and how to make tools and pottery. All that Og said is true, but I have come from long ago to tell you that my people really did as much to help you as Og and his people did.

My name is Siki, and my home was in ancient Egypt (ē’jīpt). My people lived many years later than Og and his people. My people lived about five thousand years ago, in the rich valley of the Nile River in northern Africa. We Egyptians (ē-jīp’shānz) did not live like primitive men. We had houses and farms and boats and cities. We are often called the first civilized people.

The Nile Valley has very rich soil. Our ancient Egyptian farmers raised much fine grain. I think we were really the best farmers of our time—though some say we were no better and no earlier than the Babylonian (bāb-ī-lō’nī-ān) people in the Tigris (tī’grīs) and Euphrates (ū-frā’tēz) Valley in Asia. If we had not learned how to grow grain so well, your people might not know how to raise such good crops.



Orient and Occident

PYRAMIDS IN EGYPT,—very large stone monuments to ancient rulers. Notice their shape.

The Egyptians learned also how to build good houses. Whenever Americans today build a house they are using some ideas that we ancient Egyptians taught the world. We are also the people who built the pyramids.

The most important thing we learned was how to write. You have learned to write in school. Do you know that we Egyptians were probably the first people who knew how to write? We carved pictures and words on stone. We wrote the first books. We invented writing.

If people today could not write they could not exchange ideas so easily. You could not get newspapers or books. Writing is one of man's greatest aids—and we Egyptians helped to give it to the world. Og and his people started your ways of living, but we Egyptians added a great many useful things.

* * * *

"We owe a great deal to the Egyptian people," said Jane, as Mother finished telling Siki's story. "If we couldn't raise good crops and build houses, and if we could not write or read, our country would be a strange place."

"I like the stories you have told us about Og and Siki, Mother," said Peter. "The stories are about history, aren't they? I think we should name our hill History Hill."

“That’s a fine idea,” said Jane. “I’ll beat you to the bottom of History Hill.” And both ran down the path ahead of Mother.

Finding Out about Ancient Egypt

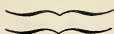
In the stories about Egypt in *Compton’s Pictured Encyclopedia*, in *The World Book*, or in any other good encyclopedia in the library, you will find many pictures about life in ancient Egypt. Whenever you find a good picture about anybody or anything described on History Hill, show it to your classmates.

Show where Egypt is on a large outline map of the world. On your map paste small paper pyramids, cut-outs of farmers, and early writing to show what ancient Egypt gave to our ways of living.

On pages 33–34 you can find the names of books that tell about peoples of ancient times. Begin now to choose the books you want to read.

The Bulletin Board

As you look through magazines and newspapers you will find pictures and clippings that show how people have lived at different times in history. Ask your teacher if you may have a Bulletin Board in your room where you can post these pictures and clippings.



The Story of the Greek Builder

Jane and Peter were disappointed. Early in the afternoon they had climbed to the top of History Hill, alone. Mother was too busy to come with them, but had said she would come up later. Now the sun was getting low, and at last Jane and Peter started down the hill. Then Peter gave a shout: "Mother is coming at last."

"Good afternoon, Jane and Peter," said Mother. "I tried to get here earlier but could not. If you are starting home, I'll walk along the path with you. I have something to tell you."

"What story are you going to tell us today?" asked Peter.

"Make believe that a man from ancient Greece is walking along with us," answered Mother. "The man is bareheaded, and his hair is dark and curly. He is strong and handsome. Over his short tunic he wears a red robe. On his feet are sandals. We must walk slowly, so that he can tell us who he is and why he came to see us. Are you ready? Now, listen":

* * * *

I am a Greek builder from the ancient and beautiful city of Athens (ăth'ěnz). I have heard that Og

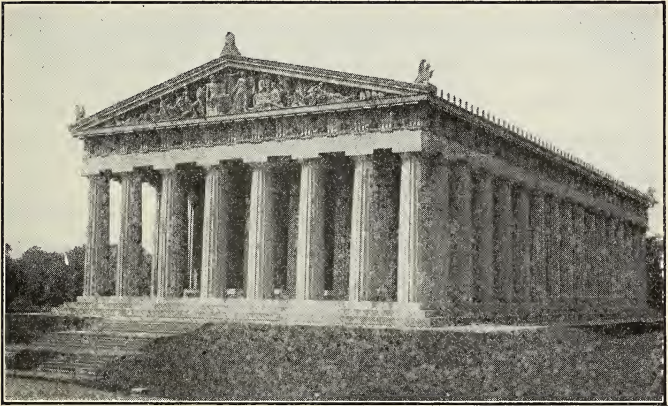


told you how his people first made tools and dishes and first used fire. Then Siki told you how his people first raised fine crops of grain and first learned to write. My people, the Greeks, did not live so long ago as the primitive people or the early Egyptians. In fact, we got many of our ideas from Og's people and from Siki's people, but we also added some ideas of our own. You people here in America today use some of our ideas. I want to tell you how we people of ancient Greece helped to make your ways of living.

Greece is across the Atlantic Ocean, in Europe. It is in the part of Europe nearest to Egypt. We Greeks were the first civilized people in Europe. To be civilized means to have good ways of living.

The pictures on this page show a Greek column, Greek clothing, a piece of Greek pottery, and a Greek ship.

The Greeks were great builders. One of the most beautiful buildings in the world was made by the Greeks in my city of Athens. It stands on a high, rocky hill. It was built almost twenty-five hundred years ago, but people still go to see what is left of it. The building is called the Parthenon (pär'thē-nŏn).

*Brown Bros.*

This picture of a building in Nashville, Tennessee, shows just how the ancient Parthenon in Athens looked. Do you think it is beautiful?

We Greeks learned how to make beautiful columns, which have been copied by builders in many other lands. You people in the United States have built many buildings on the Greek plan. In Washington, D. C., there are many buildings copied from Greek ideas. In the state of Tennessee an exact copy of the Parthenon itself has been built. In many

towns the post office or the public library or the school buildings are built in the same style as our beautiful buildings of ancient Greece. If the Greeks had never learned how to plan buildings as they did, many American buildings of today would not be so beautiful as they are.

We Greeks made many fine statues, too. You have copies of some of our statues in your museums. There are museums of art in many cities all over the world. When artists of today want to learn to make beautiful statues they study what the Greek artists of long ago made.

The greatest artist in ancient Greece was named Phidias (fĭd'ĭ-ās). He is the man who decorated the Parthenon. My people are very proud of him. He and many other Greek builders helped to make your ways of living.

* * * *

As the story of the Greek builder came to an end, Peter and Jane and Mother were in the farmyard. As they walked across the wide porch to the farmhouse door, it seemed as if the Greek builder's voice could be heard, saying, "Look at the pillars which are holding up the roof of your porch." Peter and Jane looked, and sure enough, the porch pillars were very much like those on the Parthenon of ancient Greece.

Things to Do While Learning about the Ancient Greeks

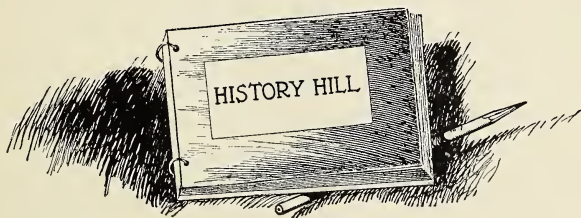
Did you put Greece on your outline map of the world?

Ask your teacher to take you to a museum to see some Greek statues.

Make a model out of soap to look like the picture of a Greek building.

Your Notebook

You will want to make a notebook to keep pictures and clippings in. Be sure to cut your pictures carefully and paste them in neatly. Make a cover for your book and give it a name. Perhaps you will want to call it *History Hill*.





Titus, the Soldier

At the breakfast table the next morning Uncle Mark told Peter and Jane that he had a surprise for them. He was going to town about noon and they might go with him.

"Go play for a while on the hill back of the orchard," Uncle Mark said. "But be sure to be back here a little after eleven o'clock so we can go to town."

As Peter and Jane walked up the hill they were thinking and planning about the trip to town. "What fun it will be!" said Peter. "I'm going to ask Uncle Mark to take us to that museum where they have things from ancient Greece and Rome. Do you remember when we were there before?"

"Yes, I remember," said Jane. "I think that the Roman shields and spears were the most interesting things there."

"I think so, too!"

Jane and Peter both jumped, for it was not Peter who answered. It was Mother, who had followed them up the hill.

"Oh, Mother," cried Jane. "You made us jump! But I'm glad you are here. Will you tell us another story on History Hill?"

"Yes," said Peter. "Please tell us a story about the Romans today."

"You seem to like my stories," said Mother. "To-day imagine that we are visited by a tall, strong man wearing sandals and a tunic. He has a shining metal shield on one arm, and he carries a spear that



A ROMAN SOLDIER

is much longer than he is. If he really were here, this is what the man would say":

* * * *

I come from a land of law and order. I come from ancient Rome, a city that once ruled most of the

civilized world. I am Titus (tī'tŭs), a Roman, and I fought in Caesar's army. Caesar was a great Roman general who lived about two thousand years ago. He was able to do much more than fight, too. He was a good ruler. If it had not been for Caesar and the Roman people, you would not live the way you do in America today.

First, the Romans gave you many of the words you use today. The language we Romans used is known as Latin. You will probably study Latin some day in school. Many English words come from Latin. The words "museum" and "interesting," which you were using just now, are from the Latin. Your uncle's name is Mark. Mark is a Roman name, or a short way of saying our Roman name Marcus. And did you ever hear of the name Vergil (vŭr'jĭl)? It is the name of Rome's most famous poet.

You got the pillars on your front porch from the Greeks. But have you seen how the bridge over the river below us there is built? The most important part of the bridge is the arch. The Romans probably learned about the arch from the Babylonians. We used arches so much in our buildings that you copied them from us. We built fine roads which can still be seen today. You copy the ways of building many of your roads and bridges from us.

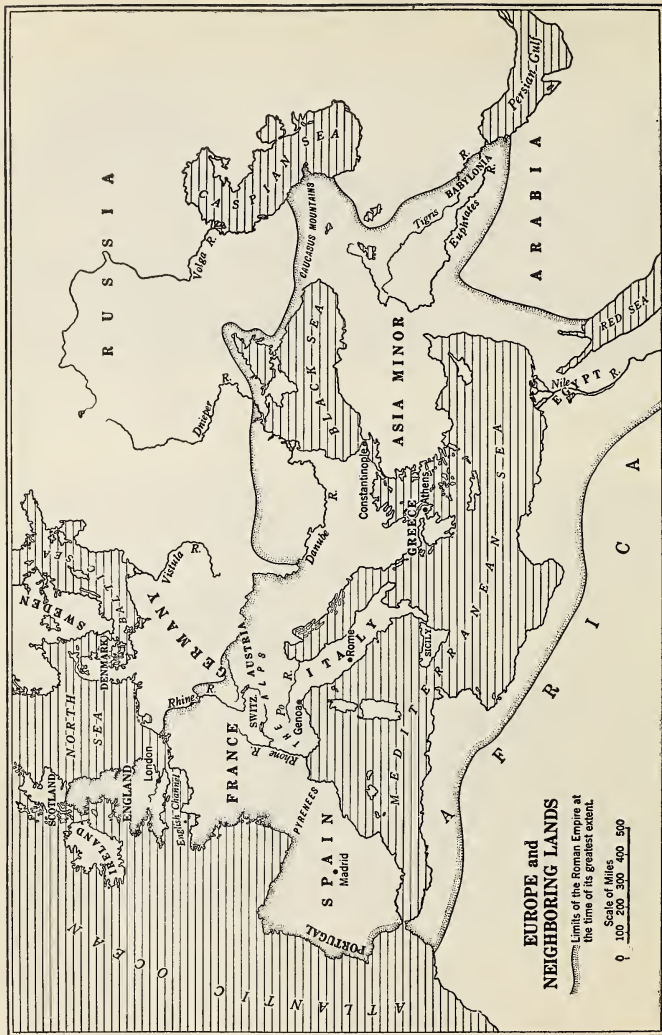


Publishers' Photo Service

AN OLD ROMAN BRIDGE as it looks now, many hundreds of years after it was built. Notice the arches. This bridge, in the city of Rome, is still in use.



A PAVED ROMAN ROAD of long ago. Study this picture to find the answers to these questions: Did the Romans have dogs and horses? Were Roman roads as smooth as ours? Do you think it was hard work to drive a chariot?



As the story of Titus came to an end, both Jane and Peter remembered the arches they had seen under bridges and over doorways and windows. "That was a fine story, Mother," Jane said. "I think Rome gave us some things that we could not do without."

"I think so, too," Peter added. As he looked up at Mother, his bag of marbles dropped out of his pocket and the marbles rolled over the grass. He started to pick them up as fast as he could, putting some in one pocket and some in another, and getting grass and dirt in, too, sometimes.

"Better put them into the bag right, Peter," said Mother. "Remember that one of the most important things the Romans gave the world is orderliness. They tried to keep things orderly wherever they went. And they went far; for the Roman Empire took in about half of Europe and large parts of Africa and Asia. But we must go home now."

"Oh, what time is it?" cried Peter and Jane together. "Is it past eleven o'clock?"

"Go look at the clock in the living room, and you can tell by the Roman numbers on the face of the clock," Mother said, smiling.

"How are they Roman numbers—?" began Peter. But Mother had started to walk down the hill, and Peter and Jane raced down to meet Uncle Mark, and to look at the clock, and to go to town.

Using Your Dictionary

Look in your dictionary to be sure you understand the meanings of these words:

primitive ancient civilized

Whenever you do not understand a word, look in your dictionary to find the meaning. Keep a list of new words with their meanings in your history notebook.

Testing Game

In the chart suggested below are the names of the visitors to History Hill. Make a copy of it on paper of your own. Then, without reading the stories again, write opposite each name who he was and what his people gave to our ways of living.

<i>Character</i>	<i>Who He Was</i>	<i>What His People Gave to Our Ways of Living</i>
Og		
Siki		
Greek Builder		
Titus		

Put your corrected test in your notebook.

Reading Time

Here are some books about the people of ancient times to add to your library—books telling about

people who have helped to make our ways of living. The librarian will be glad to help you find them. Maybe she will show you other interesting books with stories of ancient times.

Arnold, Emma J., *Stories of Ancient Peoples*.

In the *Little Cousin Series*, you can find books about *Our Little Carthaginian Cousin*; *Our Little Athenian Cousin*; *Our Little Spartan Cousin*; *Our Little Macedonian Cousin*; and *Our Little Roman Cousin*, of long ago.

Fee, Walter R., and Fee, Violet, *The Story of the Egyptians*; *The Story of the Greeks*; and *The Story of the Romans*. (These are Unit Study Books, Nos. 410, 402, and 405, published by the American Education Press.)

Haaren, J. H., and Poland, A. B., *Famous Men of Greece*; and *Famous Men of Rome*.

Lamprey, Louise, *Children of Ancient Greece*.

Wells, Margaret E., *How the Present Came from the Past*, Book II.

Talking Time

Tell the class "The Story of Cleon, the Greek Boy Who Ran at the Olympic Games" or "The Story of Horatius, the Roman Boy Whose Ancestor Kept the Bridge So Well." You will find these stories in the book called *Ten Boys Who Lived on the Road From Long Ago to Now*, written by Jane Andrews.

On the next page there are listed some books and pages where you can find many stories about the

people of ancient times and some of the things they did that helped to make our ways of living. Tell the most interesting to the class.

Stories about the Egyptians:

Arnold, *Stories of Ancient Peoples*, pages 7-79.

Hillyer, *A Child's History of the World*, pages 24-41.

Knowlton and Gerson, *Our Beginnings in the Past*, pages 117-131.

Wells, *How the Present Came from the Past*, Book II, pages 1-41.

Stories about People of the Tigris-Euphrates Valley:

Arnold, *Stories of Ancient Peoples*, pages 80-140.

Hillyer, pages 42-48, 94-108; Knowlton and Gerson, pages 135-141; Wells, Book II, pages 44-140.

Stories about the Hebrews:

Arnold, pages 152-171.

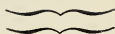
Hillyer, pages 49-55; 70-73; Knowlton and Gerson, pages 145-154; Wells, Book II, pages 142-159.

Stories about the Greeks:

Hillyer, pages 56-69, 79-88, 124-127; Knowlton and Gerson, pages 169-202.

Stories about the Romans:

Hillyer, pages 89-93, 119-123, 168-218; Knowlton and Gerson, pages 207-237.



Charles, the Teuton

One morning when Peter and Jane got out of bed it was raining. The rain spattered against the windows all the time they were eating their breakfast. Aunt Martha told them it was too wet to go out of doors. Peter and Jane had planned to climb History Hill that morning, but now they would have to stay in the house.

They went into the living room, wondering what to do. Aunt Martha followed them in and said, "Perhaps you would like to look at this book about the Romans."

She went to the bookcase and took down a large brown book. Peter and Jane sat down on the floor with the book in front of them and began to look at the pictures.

"There is a Roman arch," said Jane, pointing to a picture of a Roman bridge. "It has the shape of the arch under the bridge in our valley."

Peter nodded his head and turned the page. Then he said, all excited, "See, there's a picture of a Roman soldier. He is wearing the same kind of clothes that Mother said Titus wore. He is carrying the same kind of shield and spear, too."

Farther along in the book Peter and Jane found many pictures of Roman buildings which had been ruined. The walls of some of the buildings had fallen over. Some of the arches had fallen apart.

"I wonder why that happened," said Jane. "Couldn't the Romans keep their buildings repaired?"

"No," answered Aunt Martha, who heard the question. "The Romans became too proud of their lands and buildings. They grew lazy and selfish. They forgot their own rules of law and order. They were finally conquered by some people called the Teutons (tū'tōnz)."

Jane and Peter looked at the pictures all that morning. When Aunt Martha called them to lunch, the rain had stopped and the sun was shining. After lunch Mother said, "You may go barefoot, if you want to. You can wade through all the puddles out of doors."

Jane and Peter ran outdoors quickly, leaving their shoes and stockings inside. They walked up through the orchard to History Hill, although they sometimes hurt their feet on the stones in the path, and then would walk slowly. At the top of the hill, Mother caught up with them.

"I can think of someone whose bare feet would not have been hurt by the stones," said Mother.

"Who?" asked Jane.



PART OF AN ANCIENT VILLAGE OF TEUTONS. The village was surrounded by a stockade of pointed posts.

"A person who lived many years ago," answered Mother. "We shall call him Charles."

"Oh, do you mean another make-believe person?" said Peter. "Can he tell us more about where our ways of living come from?"

Jane and Peter sat on a stump.

"Imagine that a tall, strong man is sitting beside you," began Mother. "He has red cheeks, blue eyes, and yellow hair. Here is his story":

* * * *

My name is Charles, and my people were the Teutons. My people conquered the Romans. They took Roman cities and settled on Roman lands. They were good warriors, but they did not know about the Roman ways of living. The Teutons had lived in the forests of northern Europe before they conquered Rome. After that they lived in many places in Europe. Some settled in what are now parts of Spain and Italy. Others settled in France. Many made their homes in Germany, and later in England. In fact, my people really started most of the countries which are in Europe today. They helped to make your ways of living, for many people from England and Germany and France and the other countries of Europe have come to the United States to live.

It is from my people's language, too, that you get many of your common English words. Such words

as “father” and “mother,” and “house” and “hand” and “come” and “and” have not changed very much in sound since they were first used as Teuton words. The German and English languages use many, many words which come from the ancient Teuton language.

And my people did something else for you, also—something very important. We saved Christianity for you. Christianity is the religion which most Americans believe in today. When my people conquered the Romans we learned about Christianity, and most of us became Christians. But a little more than a hundred years after we had conquered the Romans, a new religion was started in Arabia. It was the Mohammedan (mô-hăm'ě-dăn) religion. Many people in Asia and Africa became Mohammedans. The Mohammedans were very warlike and tried several times to conquer Europe, but my people were able to beat them back. If the Teutons had not been victors in the battles against the Mohammedans, Christianity might not be the religion of the people in Europe and America today.

* * * *

As Mother finished speaking, Jane and Peter could hear the church bells ringing in the village on the other side of the hill. The bells seemed to say, “Be thankful to the Teutons. They saved Christianity.”

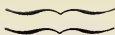
For Your Notebook

This is a picture of Charles, the Teuton, which a pupil of a school in Reading, Massachusetts, drew.



How many pictures have you drawn for your border? Be sure to draw a picture of Charles, the Teuton, for your notebook or your picture border.

Study the map on page 30 to find the countries where the Teutons settled.



Brian, the Bard

One day Peter and Jane found a new path up History Hill which led them past a little brook. They took Mother to see it. The afternoon was warm, so they sat down beside the brook to rest. The water made a sleepy sound as it flowed down over the rocks. Even the birds singing in the trees sounded sleepy. Jane and Peter were nodding before they knew it.

"This would be a good day to have a bard sing to us," said Mother.

"What is a bard?" asked Jane, sitting up.

"A bard is a man who sings songs and tells stories," answered Mother. "The bards of the Middle Ages were very important people. They went from castle to castle and sang songs and told stories."

"Wake up, Peter," said Jane, shaking his shoulder. "Mother is going to tell us another story."

"Today," said Mother, "imagine a young bard is here playing a harp. His hair, which is long and curly, falls over his shoulders. He is wearing a red cloak and tight blue trousers which fit him like stockings and which cover even his feet. Can you see him? Now listen to his story":

* * * *

Brian is my name. I am a bard, and I have come a long way to see you today. In the time called the



BRIAN, THE BARD

Middle Ages, when I was a bard to King William in England, people had only a few books. When they wanted to hear a story they gathered in the castle hall and listened while a bard sang about the brave deeds of the knights.

Some of the earliest people in the world were the primitive men, who learned to use fire and how to make tools and pottery. Later came the Egyptians,

good farmers and the first writers. After the Egyptians came the Greeks, who built beautiful buildings and made fine statues. Then came the Romans with their law and order and roads and bridges. Next came the Teutons, who destroyed many things which the Romans had, but saved Christianity and started the nations of today. After the Teutons had conquered Rome, the Middle Ages began. The Middle Ages lasted for almost a thousand years, from about the year 500 to about 1500. It was in the Middle Ages that I lived and sang and told stories for King William.



TWO OF KING WILLIAM'S SHIPS, as they are shown on a famous tapestry made in his time. They carried warriors from France to England in the year 1066.

We of the Middle Ages could not do some of the things the Greeks and Romans had been able to do.

In many ways we lived very uncomfortable lives, so that sometimes the Middle Ages are called the Dark Ages. But if you will listen to my story I think you will agree that even we of the Middle Ages had our share in making your ways of living.

King William crossed the sea from France to England in the year 1066, with his brave knights. He and his men fought the Saxons, the Teuton people who were living in England then, and conquered them. That is why he is called William the Conqueror. The language you speak today has many words in it which were brought to England by William and his men. William the Conqueror gave you part of your language. But that is not all. The people of the Middle Ages gave you two other gifts, which have hard names. They are chivalry (shĭv'ăl-rĭ) and Gothic (gŏth'ĭk) buildings.

Let me tell you about chivalry first. In the time of the Teutons, you know, people were busy fighting. But in my day people wanted to behave better, and to help them they made the Rules of Chivalry. Every true knight of the Middle Ages had to follow these rules, which were:

Be brave and good.

Help the weak.

Honor and protect women.

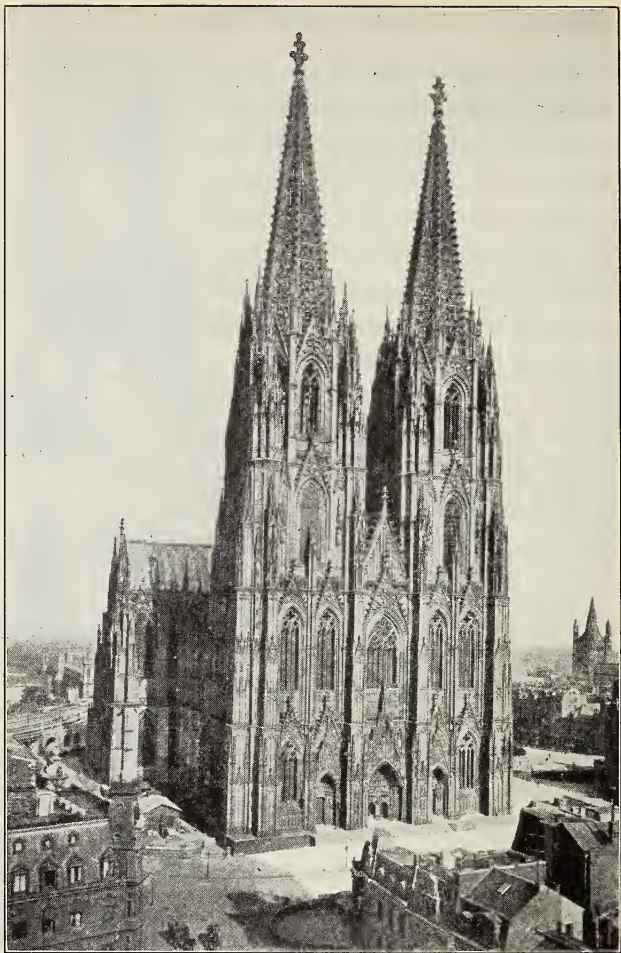
Fight for the Christian religion.

A true knight wanted to be a gentleman. A knight used to lift his helmet when he came into the presence of a lady. That is why gentlemen nowadays raise their hats when they meet a woman. Today, when you speak of a man who has good manners and is courteous and brave, you call him "chivalrous."

The Gothic way of building is a different kind of gift. Many people of the Middle Ages thought religion was the most important thing in their lives. They built beautiful churches. Later in the Middle Ages they found a new way to build their churches, called the Gothic way. Instead of having low or flat roofs, as the Greek and Roman buildings had, the Gothic churches had pointed roofs and high, pointed spires. Even the windows were pointed at the top, like hands placed together in prayer. A church

The pictures show scenes in the life of a knight: receiving the honor of knighthood, and the good wishes of a lady; fighting; and feasting.





A GOTHIC CATHEDRAL, in Cologne, Germany. Note carefully the two tall spires and the many pointed arches over the doorways and the windows. Where have you seen windows like these?

was the house of God, and its roof and spire and windows all pointed toward heaven. I am sure you have seen Gothic ways of building, for many churches of today have something Gothic about them—a spire, or a pointed window, perhaps.

These are the gifts I bring
From the Middle Ages to you:
The language of William, my king,
Which is part of your language, too;
The manners of gallant knights
In the days of chivalry;
And Gothic churches pointing
Higher than we can see.

* * * *

As Mother finished her story, and as she and Jane and Peter walked slowly down the hill, they could hear the water making a little ripple on the rocks in the brook. It sounded like faint notes of Brian's harp.

Can You Tell?

1. Why did the people of the Middle Ages build so many churches?
2. How did the rules of chivalry help the people of the Middle Ages?

Things to Do

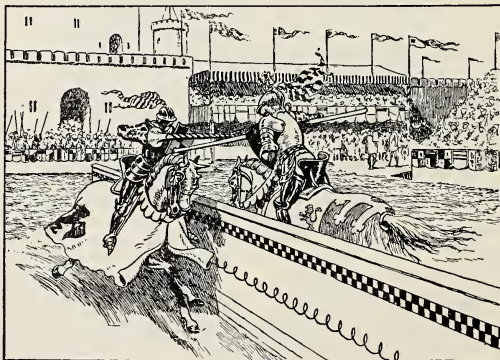
Can you find pictures of Gothic churches to put on your Bulletin Board? Perhaps you can make a model of a Gothic church out of cardboard.

Is there a Gothic building in your community? If so, tell the class about it.

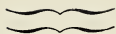
What words have you added to your dictionary list? *Chivalry* should be one of them.

Rules of Chivalry

With the help of your teacher and classmates write some rules of chivalry which you think would be helpful for an American boy or girl to follow today. What other names would you give to these rules of conduct?



KNIGHTS JOUSTING IN A TOURNAMENT



The Great Artist's Helper

The day after Brian's story Jane fell down and hurt her knee. For four long days she had to sit on the couch with her leg bandaged, and Peter stayed at home with her. On the fifth day, she could walk again, with only a little limp, and the next day she and Peter set off for History Hill.

They passed the brook and reached the top of the hill. Jane sat down to rest at a place where the ground was flat and there were bare, sandy spots. While Jane rested, Peter picked up a pointed stick and began to draw on the ground with it. He drew a picture of Jane. In the picture Jane was all straight lines and her stiff leg stuck straight out in front of her. It was such a funny picture that Jane laughed and laughed.

"Well," said Peter, "could you do any better?"

As he spoke a hand reached out and took the stick away from him. He turned around in surprise to see Mother standing just behind him, smiling. She had come up so quietly that he had not heard her.

She laughed, and said, "Pretend that an Italian named Giovanni (jō-vàn'ně) is here. He lived about four hundred years ago. Giovanni is a short young man, with dark hair. He wears a long jacket that

is spotted with red and blue paint, and he carries a roll of paper under his arm.

“Giovanni takes this stick now, Peter, and draws another picture of Jane here. It really looks like Jane running up the hill with her hair blowing in the wind. When we ask him where he learned to draw so well, he tells this story”:

* * * *

I learned to draw in Italy, about four hundred years ago. I used to study drawing and painting with a master painter. His name was Michelangelo (mī-kĕl-ăn'jĕ-lō), and he lived in Italy. Perhaps you have heard of him, for he was one of the greatest painters the world has ever had. He was a sculptor, too. A sculptor is a man who carves statues out of marble or some other kind of stone. Michelangelo's statues were of marble. One of them is often called *The Thinker*.

When Michelangelo was painting pictures on the ceiling of a church in Rome, I would hold the paint for him. Sometimes he let me paint parts of the ceiling, too. I was one of Michelangelo's helpers.

My master was one of the great artists who wanted to paint people so that they looked real. During the Middle Ages most artists didn't make people look real in their pictures. The arms and legs were stiff and awkward, and looked as if they were never made to be moved. But my master lived just at the end of the



THE THINKER,—A STATUE BY MICHELANGELO. If Giovanni had unrolled the paper he was carrying, this might be the picture on it. Do you like it?

Middle Ages, and at the beginning of Modern Times. The artists of his time were interested in people and studied them very carefully. They learned a great deal about the human body. They studied its muscles and how they looked. At the same time the artists learned how to mix better paints. With all their new knowledge Michelangelo and the other artists painted figures which looked real.

* * * *

“Well,” said Jane. “I certainly am glad that the artists learned how to draw so well. I like pictures better than anything else, don’t you?”

“Yes,” said Mother. “Artists help to make many of our ways of living. Think of the beautiful pictures we have in our books and magazines. Do you suppose you will be able to draw as well as Giovanni could?”

The Frieze

What pictures have you added lately to your frieze? Do you think Michelangelo’s helper would like the pictures on your frieze?

Reading Time

Here are listed some books about the Middle Ages and the beginning of Modern Times. They will tell you how the people lived during the Middle Ages.

Ask the librarian to help you find other books if you have time to read them.

Haaren, J. H., and Poland, A. B., *Famous Men of the Middle Ages*.

In the *Little Cousin Series* you can find books about *Our Little Saxon Cousin*; *Our Little Frankish Cousin*; *Our Little Viking Cousin*; *Our Little Norman Cousin*; and *Our Little Crusader Cousin*, of long ago.

Farjeon, Eleanor, *Mighty Men from Beowulf to William the Conqueror*.

Lamprey, Louise, *In the Days of the Guild*.

Lansing, Marion F., *Page, Esquire, and Knight*, and *Life in the Greenwood*.

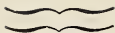
Dutton, Maude B., *Little Stories of England*, and *Little Stories of France*.

Talking Time

On pages 219-332 of Hillyer's *A Child's History of the World* you can find many stories of things that went on during the Middle Ages. Tell them to the class.

"The Story of Wulf, the Saxon Boy, Who Helped to Make England," is found in *Ten Boys*, by Jane Andrews, pages 115-136, and on pages 137-170 there is the story of "Gilbert, the Page, Who Will One Day Become a Knight."

Read pages 322-326 and 333-336 of Hillyer's *A Child's History of the World*, and tell about inventions that helped to start Modern Times.



The Cabin Boy of the Santa Maria

The next day Jane and Peter and Mother went again to History Hill.

Peter said, "I've been thinking of a queer thing. This summer we have heard stories about people from many different parts of the world. There was Og from primitive times, and Siki from Egypt, the builder from Greece, and Titus, the Roman soldier. After him came—let's see!—Charles, the Teuton boy, and then Brian from England, and yesterday Giovanni, who came from Italy. But we haven't yet had a story about anyone who came from America."

"That is strange, isn't it!" Jane agreed. "I hadn't thought of it before. I wonder where America was all that time."

"Maybe I can help answer your question," said Mother. "Today let's pretend that a sailor boy is visiting us. Can you see him? Imagine that he tells us this story":

* * * *

Hello, mates! I heard you talking, and I think I can answer your question about America. It made me think of the first time I ever went to sea.

But first, perhaps, I should tell you who I am. My

name is Pedro (pā'drō)—that's Spanish—and I was born in the Spanish city of Madrid (mā-drīd'). When I was sixteen I signed up as a cabin boy on a ship called the *Santa Maria* (sán'tā mā-rē'à). The captain was a man named Christopher Columbus. You've heard of him, haven't you?

You celebrate the twelfth of October each year, because that is the date on which Columbus discovered America. Well, I was with Columbus on the first Columbus Day, in 1492. Would you like to hear about it?

First, I'll tell you a little about Columbus. He was born in Genoa (jĕn'ō-ā), Italy. As a boy he wanted to be a sailor. He studied maps and charts. In those days most people thought the earth was flat, like a plate. But Columbus had read some old Greek books which said the earth was round. He thought he could sail west from Europe across the Atlantic Ocean and reach Asia.

At first Columbus couldn't get ships, but at last the king and queen of Spain gave him ships and sailors. It was then that I joined his crew as cabin boy. One day in August, 1492, we set sail from a harbor on the coast of Spain. We went first southwest and then west over the Atlantic Ocean. Our little ship was tossed on the waves so much that it seemed as if all of us would be washed into the sea. For over a month we sailed to the west, over water

which nobody had ever sailed on before. The sailors began to say, "There is no end to this ocean. We should turn back." Columbus paid no attention to them. At last one evening we saw a green branch in the water. The next day a land bird flew near the ship. Then we knew we were near land. Sure enough, in a few days we stepped out on a strange shore. What a shout of joy went up then!

The land was a small island which Columbus thought was in the part of Asia called the Indies (in'diz). It was really one of the islands you now call the West Indies. The West Indies are near the coast of Florida. When the red-skinned natives on the island came out to meet us, Columbus called them "Indians" (in'di-ānz). He did not know that he had discovered a New World.

* * * *



The three ships of Columbus's first voyage across the Atlantic. The middle picture shows his flagship, the *Santa Maria*.



COLUMBUS'S FIRST LANDING IN THE NEW WORLD. He is laying claim to this island for Spain.

"Now, Peter and Jane," said Mother, "do you see why none of your other make-believe visitors on History Hill came from America? Until Columbus found America, less than five hundred years ago, the people in Europe did not know that there was such a place. Even Columbus thought it was the Indies of Asia that he had found. But if it hadn't been for him and the explorers who came after him there might not be any United States today. It was less than three hundred fifty years ago that the first English settlement was begun in America."

"We owe a lot to Columbus, don't we?" said Peter.

Then Peter and Jane ran down the hill to a little pond in the pasture. They found a piece of wood shaped like a boat, which they named the *Santa Maria*. When Aunt Martha called them to lunch they were still pushing the boat in the pond, trying to make it discover America.

Reading Time

Every boy and girl should read about the exciting life of Columbus. Here are some books about him: Brooks, E. S., *The True Story of Christopher Columbus*. Mitton, G. E., *Columbus*.

Potter, Edna, *Christopher Columbus, the Story of a Great Adventure*.

Stapley, Mildred, *Christopher Columbus*.

You can find the story of Columbus also in many books that have stories of famous discoverers. Some of these are:

Foote, A. E., and Skinner, A. W., *Explorers and Founders of America* (Revised).

Haaren and Poland, *Famous Men of Modern Times*.

Halleck, Reuben P., and Frantz, Juliette, *Founders of Our Nation*.

Shaw, Edward R., *Discoverers and Explorers*.

A Play About Columbus

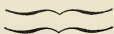
The story of Columbus makes a fine play to give in your classroom.

Read in the books listed on pages 58 and 59 about the things Columbus did. You may appoint a committee to tell these stories to the class. Then choose the most important happenings for the scenes in your play. They might be:

1. In Genoa—Things Columbus did when he was a boy.
2. In Spain—He tries to get ships.
3. On the *Santa Maria*—Sailing over the sea.
4. In America—Land at last.



What does this picture show you about ways of living in a colonial town? Compare the clothes of this boy and girl with your own.



Priscilla

“Good morning, Peter and Jane.”

It was Mother who spoke, and she made a curtsy as she greeted Peter and Jane. Peter and Jane had just come up History Hill, and Mother was standing there waiting for them. She was dressed in a long brown dress with a white collar, and had a little bonnet on her head.

“Where did you get those clothes, Mother?” asked Peter and Jane in surprise.

Mother laughed. “These are the clothes of a young woman named Priscilla. She lived in colonial times. If she were really here, she might tell you this story”:

* * * *

I lived in Massachusetts more than two hundred years ago. My home was in Boston when Boston was only a small town. I lived there in colonial times.

You know how Columbus discovered America. Well, after 1492, many other explorers crossed the Atlantic and made discoveries. Spanish settlers came to live in many parts of the New World. It was a long time, however, before many people came to live in what is now the United States. Finally, in 1607, some Englishmen came to live in Virginia. A few



years later, the Pilgrims came to Massachusetts. Before many years had passed there were English colonies all along the Atlantic coast of what is now our country.

A colony is made up of groups of people who have moved from their homeland and started settlements in a new land. The new land they occupy is also called a colony. Many of the colonies in America were ruled by England. England ruled her colonies for more than a hundred and fifty years. It was not until the year 1776 that the colonies broke away from the homeland. Colonial times in America are the years between 1607 and 1776.

In colonial times our ways of living were very different from yours today. We had to work very hard, too, because it is hard work to start homes and farms

The pictures show colonial work: making candles, making soap, hunting, cooking, and spinning.

in a new land. The early settlers started the first farms and towns in America. They started schools and churches, and made the first American books and newspapers. Of course, the colonists brought many of their ideas from Europe, but they added some ideas and ways of their own. The colonists took some ideas from the Indians, too.

One of the greatest men in colonial times was Benjamin Franklin. He was born in Boston but he moved to Philadelphia when he was a young man. There he printed a newspaper, which soon became one of the best in all the colonies. Franklin wrote books, too, and he started a college and a public library in Philadelphia.

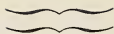
Franklin was the man who sent a kite up in the air to find out what lightning is. Then he invented lightning rods. Lightning rods are put on houses to keep lightning from setting the houses on fire.

Franklin invented a stove, too. Before his time people had only fireplaces to warm their homes and cook their food. Franklin's stove was a great help.

* * * *

Just then a big drop of rain fell on Jane's head. The sky was covered with clouds.

"We must all run home," said Mother. And she and Peter and Jane hurried down the hill as fast as they could go.



In Washington's Time

Jane and Peter were sitting at the top of History Hill. It was late afternoon and the sun was sinking toward the west. All afternoon Peter and Jane had played that they were living in colonial times. Mother had gone to town and would not be back till next week.

"Someone is coming up the path," said Peter. Jane listened, and she too heard the sound of footsteps. In a few minutes a strong man, walking with long strides, and with his shoulders thrown back, came in sight. He was dressed in a blue and tan uniform, with tight-fitting trousers, boots up to his knees, and a long-tailed coat. On his head was a three-cornered hat, and a short sword was fastened to his belt.

"It's a soldier," whispered Jane. "I've seen pictures of men wearing uniforms like that."

As the man reached the top of the hill he saw Peter and saluted him. Peter jumped to his feet and gave the man the Boy Scout salute. The soldier bowed to Jane, and she curtsied to him. Then they saw that the man was Uncle Mark. He had come to visit them on History Hill.

He said to them, "Before your mother went to town this morning she brought this old uniform from the attic. She asked me to put it on, and to tell you the story of Captain Dunbar."

"Oh, do, please!" cried Jane and Peter.



Jane and Peter, on History Hill, are about to hear the story of Captain Dunbar, as told by Uncle Mark.

"All right," said Uncle Mark. And then he sat down and told them this story:

* * * *

I am Captain Dunbar, of the army of George Washington. You know the thirteen English colonies in America in 1775 began a war to free themselves

from England. That war is called the Revolutionary War. The American troops in it were under the command of George Washington, and I was one of his soldiers. Washington and his army won the war.

You could not have any United States today if it had not been for the Revolutionary War. Our victory in the war made it possible to have the country you live in. But of course the soldiers didn't do it all alone. All the people who were on the American side did their share. The Revolutionary War was ended in 1783, but our present government wasn't really started until 1789. Well do I remember when it was started, too.

After the Revolutionary War the Americans tried a kind of national government for the union of the thirteen states, but it did not work well. Then some of our ablest men got together and planned a new kind of government. They wrote a Constitution for it. A constitution is a plan for running a country. When our Constitution was agreed on by the states, the people elected a new Congress and a President to start the new government of the United States.

George Washington was the first President. I was there when he took office in 1789, and I tell you it was a fine sight. Washington came out on a balcony where all the people could see him. He put one hand on the Bible and raised his right hand, and promised

to be faithful to the new Constitution. All the people shouted and sang, and were very glad.

* * * *

"We owe a great deal to Washington and the men of his time, don't we?" said Peter.

Uncle Mark nodded his head. "George Washington was a very great man," he said. "He is 'first in war, first in peace, and first in the hearts of his countrymen.' I think we can all be proud to be his countrymen, don't you?"

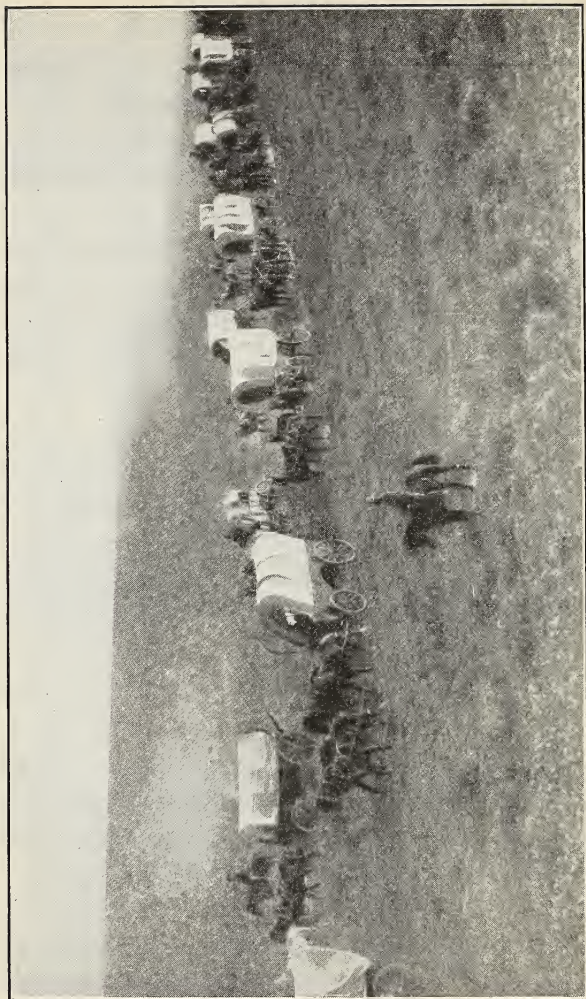
"I think so, too," said Jane.

As he spoke, Uncle Mark got up, bowed to Jane, and saluted Peter. "I have rested as long as a soldier may," he said. "Good-by."

Peter and Jane stood up and said, "Good-by." Soon Uncle Mark was out of sight on the path down the hill.

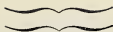
Talking Time

Tell the class what you know about George Washington and the Revolutionary War. Can you read any of the books listed on page 79? Some of them tell about the time of the Revolutionary War.



Paramount Picture

This is a "train" of covered wagons such as have been shown in a moving picture. They are much smaller than the wagons used by the pioneers.



Sky Pictures

One day late in the summer Peter and Jane and Mother climbed History Hill again. Some of the apples were getting ripe, and as they went through the orchard they gathered a few. Near the top of the hill they sat down in a grassy nook to eat the apples. The sky was blue and the sun was shining. A wind was blowing little white clouds across the sky.

"We have had two stories about Americans here on History Hill, haven't we?" said Peter. "Priscilla told us about colonial times and Benjamin Franklin, and Captain Dunbar told us about George Washington and how the United States was started."

"I suppose many, many other Americans have helped to make our country and our ways of living," said Jane. "But we shall not have many more stories now. It will soon be time for us to go back to the city and start going to school again."

Both children were quiet for a few minutes, watching the clouds sail past above them. Some of the clouds seemed to make pictures in the sky.

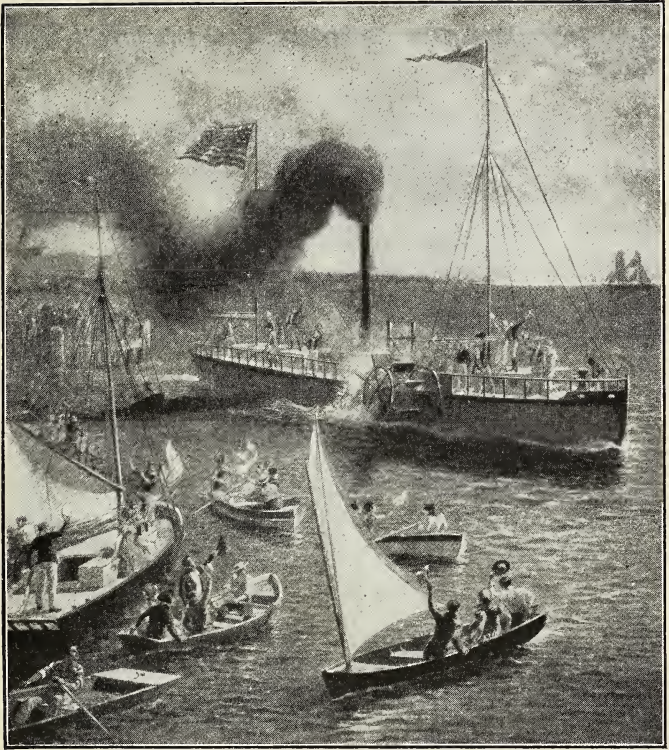
"Look!" said Peter suddenly. "Look there at the sky, at the edge of the hilltop. It looks like a big wagon painted blue with a white canvas top on it."

"I see it, too," said Mother. "It looks much like a covered wagon such as the pioneers used. Pioneers were the people who first settled in the different parts of our country. In moving westward many of them traveled in covered wagons. Imagine that the wagon is pulled by two oxen, that a man is leading the oxen, and that a woman is walking behind the wagon, carrying a baby."

The cloudlike wagon moved on toward the sinking sun. Then Mother made up a song of the pioneers. She sang:

"We are the people who settled the West,
We are the Pioneers.
Our covered wagons blazed a trail
Traveled for years and years.
New states sprang up where our feet have trod;
New towns, new hopes, new fears.
We conquered the West, and we sing you now
The song of the Pioneers."

The cloud picture of the covered wagon passed beyond the sight of Jane and Peter and Mother. But hardly had it gone when the clouds made another picture. It looked like a steamboat, painted white, that seemed to be sailing on a sea as blue as the sky. From its smokestack there seemed to come little puffs of smoke, like white clouds edged with gray.



Courtesy of the New York Historical Society

FULTON'S STEAMBOAT, THE CLERMONT. This modern painting, by Henry A. Ogden, shows the start of the *Clermont's* first voyage.

"I remember seeing a picture of Robert Fulton's little steamboat," said Jane. "It was the first successful steamboat. It was made in 1807. That cloud picture looks like Fulton's ship."

“Yes, it does,” said Mother. “If it really were that little ship, the crew might be singing a song like this”:

We sing farewell to sailing ships
That wait for winds to blow.
Fulton built a fine new boat
And steam will make it go.

With steam to make the paddles turn,
The paddles push the sea.
On river or on ocean
Our ship moves steadily.

A long farewell to sailing ships!
Steam will have its day.
Ships the wide world over now
Will sail this better way.

As the little ship sailed on across the sky and disappeared, the sun began to sink below the hilltops. But the sky pictures were not finished. New ones looked like great gray buildings with many, many smokestacks. Puffs of heavy smoke seemed to come from the smokestacks, and Peter and Jane thought they could hear the whir of many, many machines.

“The buildings look like the factories in our city at home,” said Peter.

“Yes,” answered Jane. “Think how much the people who work in factories help to make our ways of living.”

Testing Game

Stories 10, 11, 12

On a sheet of paper write the numbers 1 to 9. Then after each number write one or two words needed to complete the sentence of the same number.

1. The part of America where the Pilgrims lived was _____.

2. The years between 1607 and 1776 are called _____.

3. We call the groups of people who leave their homes to make settlements in a new land _____.

4. One of the greatest men in colonial times, who wrote a newspaper and invented useful things, was _____.

5. The first President of the United States was _____.

6. The war that was fought in 1775-1783 is called the _____.

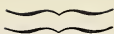
7. The plan which was made for running our country is called the _____.

8. The people who first settled the western part of our country were called _____.

9. The first successful steamboat was made by _____.



Here you see imaginary people who visited History Hill. Tell who each is, and what he would say about our ways of living.



The Last Visit to History Hill

Summer was almost over. The days were getting shorter, and it was time for Jane and Peter to go back to their home in the city. They were climbing History Hill for the last time.

"We've had lots of fun here this summer," said Jane.

"Yes," answered Peter. "And the best part of it was the stories Mother and Uncle Mark told us. How many people have we heard about, here on History Hill?"

"Yesterday we saw the sky pictures. The time before that we heard Captain Dunbar's story, and the day before that, Priscilla's story of colonial times."

"The story of Pedro came before that. He was cabin boy on Columbus's ship, and told us how America was discovered."

"And before Pedro came the story of Giovanni, the boy who drew pictures. His master, who lived about four hundred years ago, was a great artist. Who came before him?"

Peter thought a moment. "The story of Brian, the man who played a harp for William the Conqueror,

came before Giovanni. Brian told us of the people who lived almost a thousand years ago, and who gave us chivalry and Gothic ways of building."

"Before Brian," said Jane, "we heard from Charles, the Teuton boy. His people gave us many of the words we use today. They saved Christianity, and started some of the nations which are still in Europe today. And Titus, the Roman soldier, came before Charles. Titus told us how the Romans gave us law and order. He told us about arches, too. Do you remember?"

"Of course I do," answered Peter. "And before Titus came the story of the Greek builder. Do you remember what he talked about, Jane?"

"Yes. He told us of the beautiful buildings the Greeks made. Before that, we had the story of Siki, from Egypt. He told us about good farming and about the first writing."

"The first story of all was that of Og, the primitive man. He told us how his people learned to use fire and first made tools and pottery."

Jane was counting the visitors on her fingers. "Og was first, then Siki, then the Greek builder—that's three!—then Titus, then Charles, then Brian, then Giovanni, then Pedro, then Priscilla, and then Captain Dunbar. That makes ten visitors we have had this summer, not counting the sky pictures."

"Yes," replied Peter. "First were the primitive people, then the Egyptians, then the Greeks, then the Romans, and then the Teutons. Then came the people of the Middle Ages, then the artists and explorers, and last, the people of America."

The primitive people, the Egyptians, the Greeks, and the Romans of whom Jane and Peter talked, lived in Ancient Times. They all lived more than fifteen hundred years ago. After Ancient Times came the Middle Ages, which lasted for about a thousand years and ended less than five hundred years ago. Since the Middle Ages we have had Modern Times.

"Do you suppose we shall hear more stories on History Hill again next summer?" asked Jane. "Perhaps Mother could tell us a great deal more about where our ways of living come from."

"I wish she would tell us. I never knew before that our ways of living started so long ago."

"I never knew before, either, that so many people have helped to give us our ways of living."

As Peter and Jane went down the path to the farmhouse, they heard the leaves rustling. The water rippled gently over the rocks in the brook. The wind seemed to say, "Think how much you owe to all the people who have lived before you. Be grateful to all the people who have helped to make

your ways of living. Most of your ways of living have come from the past!"

Things You Might Like to Do

When you have your History Border done, invite the boys and girls from the next room in to see it.

How would you like to write a poem for your notebook—a poem about the visitors to History Hill?

Imagine you are one of the make-believe visitors to History Hill. Ask your teacher if you may act out something in front of the room so the class can guess who you are.

Use in sentences the important new words you have learned in this Unit and ask your classmates to explain what they mean.

Making a Play: History Hill

You may write a play about History Hill and give it in the assembly room for the whole school to enjoy. The stories in this Unit will help you to choose the characters, decide what they shall say, and plan their costumes.

Reading Time

Make a list of the books that you have read. Put the list in your notebook.

Add these books to your library that tells the story of History Hill. They are books that tell how we got our ways of living in America.

Baldwin, James, *Four Great Americans*.

Eggleston, Edward, *Stories of American Life and Adventure*.

Foote and Skinner, *Makers and Defenders of America*.

Gordy, Wilbur F., *Stories of Early American History*.

Guerber, H. A., *The Story of the Thirteen Colonies*; and *The Story of the Great Republic*.

Knowlton, D. C., and Gill, C. M., *When We Were Colonies*.

Perkins, Lucy Fitch, *The Puritan Twins*; *Colonial Twins of Virginia*; and *The Pioneer Twins*.

Scudder, Horace E., *A Short History of the United States*.

Stone, G. L., and Ficket, M. G., *Everyday Life in the Colonies*.

Tillinghast, L. Morton, and Colman, E. M., *Colonial Life in America*.

Waddell, John F., and Perry, Amy, *Long Ago*.

Talking Time

Perhaps you would like to tell some of these stories to the class.

You can find the "Story of Jonathan Dawson, the Yankee Boy," in Andrews, *Ten Boys*, pages 210-232. The last story in that book is called "The Story of a Few Days in the Life of Frank Wilson, the Boy of 1885." If you tell this story, add some things you do

today, such as going to the movies and listening to the radio. This will bring the story up to date.

On pages 25-111 in Waddell and Perry's *Long Ago* you can find stories of how the Indians lived in different parts of America.

On pages 114-170 of *Long Ago* there are many stories that tell how white men learned to live in America; pages 171-205 of the same book tell you stories about the way colonial children lived in our country.

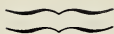
How the pioneers who went west lived is told on pages 216-276 of *Long Ago*.

UNIT II



THE EARTH WE LIVE ON





How the Earth Began

After the summer of visits to History Hill, Jane and Peter were back at their home in the city. One evening their father brought home a large package. When they asked him what was in the package, he answered, "A story."

"How can a story be in a package?" asked Peter.

"I'll show you after dinner," said Father.

Finally the package was unwrapped. Out came something large, and round, and shiny. At once Peter shouted, "It's a globe!"

"It's bigger than Grandfather's!" Jane exclaimed.

"But, Father," Peter insisted, "you said that it was a story."

"So it is," Father replied, "and a very strange and interesting story, too. Let us pretend that the globe is going to tell us the story of the earth. You watch the globe and listen."

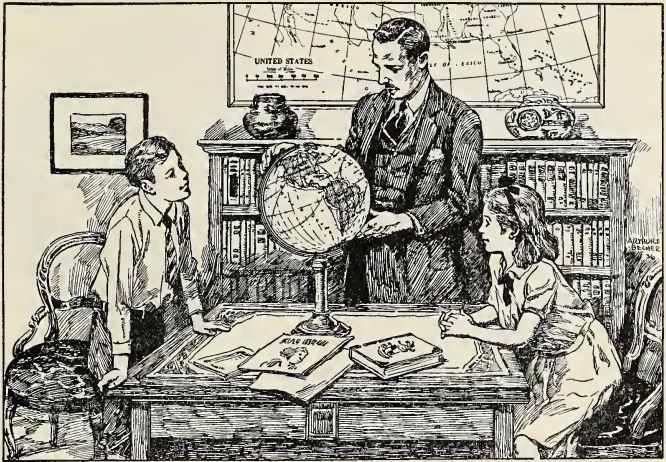
Father began his story. Jane and Peter watched the globe so closely that Father's voice seemed to come from it. On pages 85-87 is the story they heard.

Credits: National Park Service; Case; South African Railways and Harbours.

The pictures on the opposite page show different kinds of land: seashore, forest, pasture, desert, large wheat field, and orchard.



This picture shows how the earth and other planets were probably drawn out of the sun—as great masses of gases—by the attraction of some star passing near it.



PETER AND JANE AND THEIR FATHER

"I am a picture of the earth. But today I shall talk as if I were the whole great earth itself.

"Ever so long ago, oh, much longer ago than anybody can imagine, I, the earth, was not here at all. Some scientists say I was a part of the sun. The sun is hotter than anything you can think of. Where these scientists say I was at the edge of the sun, it is much, much hotter than boiling water or melted iron. They say I jumped and twisted like the flames that rise from the fire in a great furnace.

"Then something very strange happened to me. All of a sudden I was drawn right out of the sun. I kept on going until I was millions of miles away.

“After I left the sun, I began to cool off. Most of my body, after a time, was a great ball of melted rock, melted iron, and many other things. As my outside grew cooler it turned into a thick crust of solid rock.

“As my body became still cooler, great wrinkles formed in my outside crust. The top of the wrinkles became rock hills and high lands, and the spaces between were valleys and low places. Then one day I felt rain falling on my crust. First the rain made little brooks, and afterwards larger streams and great rivers. Slowly the rivers filled the low places, and then I had great ponds and lakes to glisten in the sunlight. After a long, long time, the water covered all the low parts of my crust and I had real oceans. Then I looked very much as I do now. The parts of my crust above the water are the continents and islands.

“This globe you are looking at shows the shape I have today. The blue parts of the globe show where my oceans and lakes and rivers are. The brown and green parts of the globe show my continents and islands. You can read the names of my oceans and continents on the globe.

“You can see that I am really a big, round ball. I turn around and around all the time. It takes one whole day of twenty-four hours to make each



WESTERN HEMISPHERE

EASTERN HEMISPHERE

Here are two small views of the globe, showing the oceans and the continents of the earth.

turn. When the place where you live is turned toward the sun, you have day. When it is turned away from the sun, you have night.

“Make the globe turn slowly. Notice the circles, of different sizes, running around the globe. See the longest of these lines, running all around my middle where I am the biggest. People call this line my Equator. There are no such lines showing on the real earth, but they are shown on most maps and globes. The point farthest north of my Equator is my North Pole. The point farthest south is my South Pole. You will learn more about them in another story which I will tell you later. I have told you enough for this time. I’ve told you how I came from the sun, how I

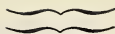
cooled off and wrinkled my crust, and how I got my oceans and continents."

Writing a Summary

After you have talked with the rest of your class about how the earth began, try writing on the board or in your notebook the most important ideas of the story. Use clear, short sentences. We call this writing a *summary*. A summary is a short way of retelling the most important ideas of a longer paragraph or story. Your summary may be called *How the Earth Began*.

Day and Night Game

Choose a classmate to play a game to show the rest of the class why we have day and night. One partner may be the sun, while the other pretends he is the earth. Pin a map of the United States on the front of the one who is the earth. Let him turn slowly around and around and tell when it is day and when it is night in the United States as he turns. Why is it day or night?



The Earth's Covering of Air

A few evenings later, Jane and Peter were standing at the window watching the sunset. They saw great banks of clouds in the west turn from golden yellow to flaming red and purple. Quickly the colors faded, leaving the clouds dull and gray. The twins wondered if it was going to rain.

"I know what you're thinking about," said a voice in the room. Jane and Peter had not heard Father come in. Once again it seemed as if the globe were speaking. They listened eagerly. "You are wondering whether tomorrow will be a bright, sunny day or whether rain will keep you indoors. Let me tell you another story about the earth.

"The other day I told you about the earth's continents and oceans. Today my story is about the great layer of air which covers the earth all over. Most people do not think of the air as a part of the earth. But the covering of air is really a very important part of the earth. The earth is wrapped in a layer of air. The layer of air is about two hundred miles thick. This blanket of air never leaves the earth. Even the top of it never blows away toward the moon or the stars.

“It is very lucky for you, and for all the plants and animals, that the earth is covered with air. Everything that lives on the earth needs air to keep alive. People and animals and plants breathe the air. Even the fish need air; they get it from the water. Close to the bottom of the earth’s layer of air, the air is thick and easy to breathe, but as one goes higher the air gets thinner. Near the tops of high mountains the air is so thin that it is hard for people to breathe. Higher up the air is still thinner.

“The air makes it possible for us to breathe, and it also helps us in other ways. It keeps the sun’s scorching rays from burning the earth, and it keeps the bitter cold of night from freezing the earth. The air is like a wonderful blanket which lets just enough heat and light reach the earth to give us pleasant sunshine and to make things grow.

“You were wondering if it is going to rain. Another thing the air does is to give us rain. Water rises into the air from the oceans, lakes, and rivers. You cannot see this water, or moisture, but it is in the air just the same. The moisture rises high in the sky. There it often cools quickly, and then you can see it as clouds. The water in the clouds falls down again in raindrops or snowflakes. The rain waters all the forests and fields and helps all the crops to grow. Because the air lifts water into the sky and then lets it fall on the

soil as rain, we are able to grow the foods we need.

“Still another thing the air does is to give us the wind. The wind is only air which is moving. The wind flies kites, turns windmills, and pushes sailboats. Winds blow clouds through the sky, and help to carry water from the oceans to the land. Perhaps, Peter and Jane, the wind will blow away the clouds tonight, and tomorrow will be clear enough for you to play outdoors.”

* * * *

You have learned that the part of the earth we see is really made of three things. Its crust is rock; its oceans and lakes are bodies of water; and its great outside covering is the air. Whenever you think



The pictures on this page show several things the wind does: making kites fly; bending trees; pushing boats; making windmills work, flags fly, and weather vanes point to the wind.

or read about the world or the earth, you must be sure to remember all three of these things.

The Bulletin Board

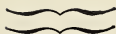
You will want to find pictures and maps that show many things about the earth we live on. Post them on your Bulletin Board for the class to enjoy.

Watching the Weather

Bring to class weather reports from the newspapers.

Look for weather vanes on your way home. See if you can tell from which direction the wind is blowing.

How many days this week has it rained? It would be fun to keep a record or chart of the weather. See how many times the weather reports of the newspapers and the radio come true.



The Earth's Trip Around the Sun

"Look, Mother!" called Jane, as she and Peter came home from school. "See the red and yellow leaves. I found them on the ground under the maple trees."

"Yes, Jane," answered Mother, "they are pretty, aren't they? Soon all the autumn leaves will have fallen from the trees. Before long we shall have winter. Then you'll have to wait until spring before the trees have leaves again."

"Why do we have summer and winter and spring and autumn?" Peter asked.

"That's a good question," said Mother. "Let us go watch the globe once more and imagine that you hear its voice instead of mine answering Peter's question."

"What does the globe have to do with spring, summer, autumn, and winter?" asked Jane.

"Listen, and the globe will tell you," said Mother.

"You remember that the earth turns around once each day of twenty-four hours. As the earth turns, it gives you day and night. The earth also makes a long trip around and around the sun. It takes a whole year to go once around the sun, and that trip is what makes spring, summer, autumn, and winter. The trip looks

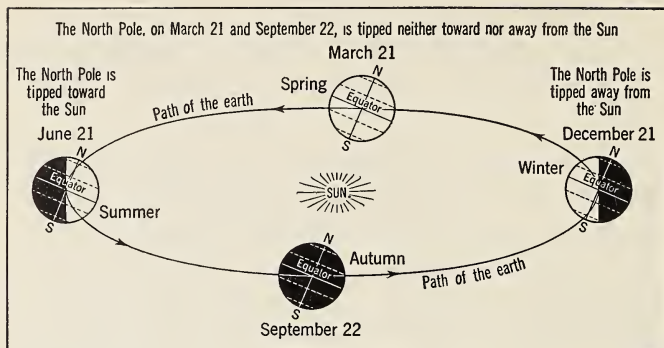


Diagram of the earth's position at four points in its trip around the sun. N shows location of the North Pole; S, the South Pole. The earth is really very much smaller than it appears here, as compared with the sun and the length of the earth's trip.

like this," said Mother as she drew a picture of the earth's trip around the sun.

"During the earth's year-long journey around the sun, it keeps turning around and around, taking twenty-four hours for each turn. Notice how the globe turns, on a rod passing through it from pole to pole. There is no such rod in the real earth—only an imaginary straight line called the earth's *axis*. The North Pole and the South Pole are the places on the earth's surface at the ends of the axis. The earth's axis always points in the same direction—toward the North Star.

"When the earth is traveling over the part of its path marked 'Summer' in the diagram, its North

Pole is tipped toward the sun. Then in the United States there are from thirteen to fifteen hours between sunrise and sunset each day. These are the long days of summer, the days of June, July, and August.

“When the earth is on the other side of the sun, on the part of the path called ‘Winter’ in the diagram, the North Pole is tipped away from the sun. Then our country has only from nine to eleven hours of sunshine each day. During these short days in December, January, and February, the sun does not have very much time each day to warm the United States. The weather is much colder. Then it is winter.

“As the earth travels over the parts of its path called ‘Spring’ and ‘Autumn’ in the diagram, the earth’s axis still points to the North Star. For a month or more the North Pole is not tipped much toward the sun or away from it. The earth reaches these parts of its path in March and in September. On March 21 and on September 22 the day and night are the same length, twelve hours each. We have spring in March, April, and May, and autumn in September, October, and November.

“All the countries which are as far north of the Equator as the United States is, have their spring, summer, autumn, and winter at the same time we do. Spring, summer, autumn, and winter are called the four seasons. The countries as far south of the Equator



Armstrong Roberts

SPRING



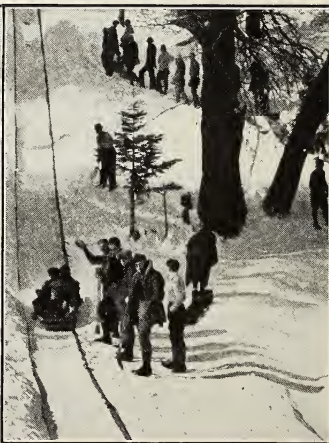
Armstrong Roberts

SUMMER



Armstrong Roberts

AUTUMN



WINTER

What are the people in each picture doing?

as we are north of it have winter when we have summer, and spring when we have autumn.

"Summer brings sunshine, warm weather, and warm rains. On the warmed earth, plants grow, and fruits and crops ripen. In winter there are ice and snow, and the leaves are gone from most of our trees. Do you see now, Peter and Jane, how the seasons come from the earth's long trip around the sun?"

Drawing Time

Draw a picture of the Earth's Trip around the Sun for your Bulletin Board.

Writing a Summary

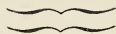
Write a summary telling why we have four seasons.

Starting a New Notebook

You will want to make a notebook to keep the pictures you collect and the lists and summaries you make for the stories in this Unit. You may call this book *The Earth and I*.



Peter and Jane are beginning their study of how to read maps.



Reading Maps

One evening Jane found Peter looking at the globe. "What are you thinking about, Peter?" she asked.

"I'm thinking about the globe," answered Peter. "There are so many things I'd like to know about it. Why are there so many colors on it? What do all the marks on it stand for?"

"I'd like to know those things, too," said Jane as she stood beside Peter.

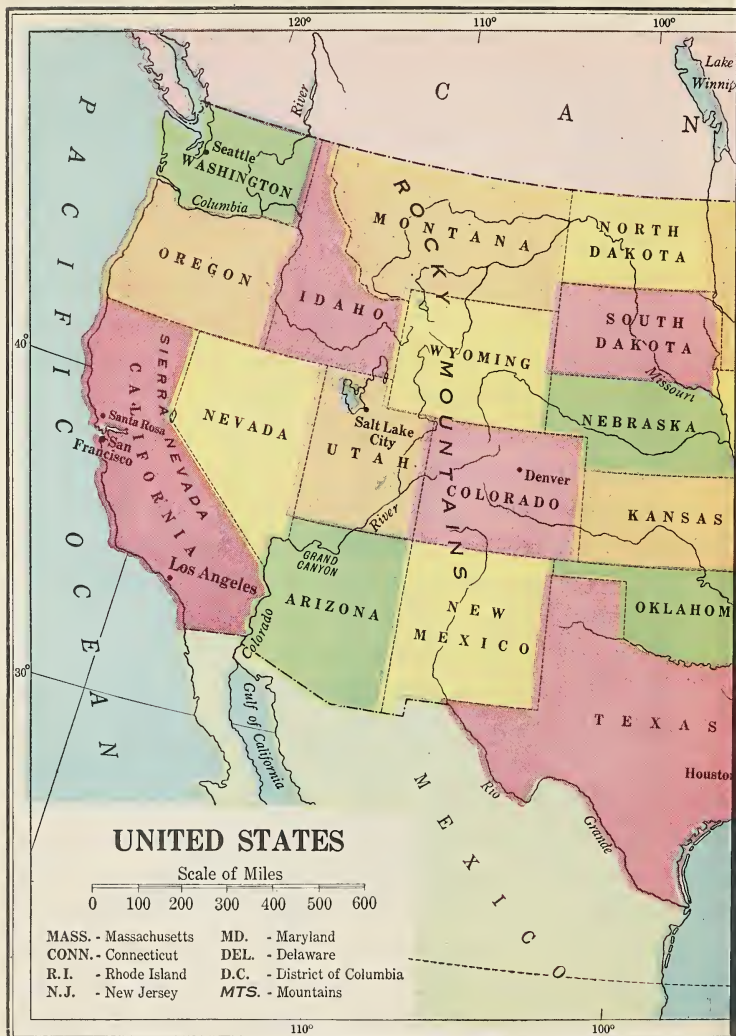
"Would you?" asked Father, as he looked up from his writing. "To know what the colors and marks on the globe mean, you must be able to read a map."

"Read a map?" Peter asked in surprise.

"Yes, of course," said Father. "If you can read words you can get the ideas they tell, and if you can read maps you can get the ideas they tell."

"How do you read a map?" asked Peter and Jane at the same time.

"I'll teach you," said Father. "You can learn from the maps hanging on the walls. The one over the fireplace is a map of the world. The one over the bookcase is a map of the United States." As Father pointed at the map of the United States, he said, "See if you can find Lake Superior on this map."





Peter and Jane looked closely at the map on the wall over the bookcase. Soon they found the words *Lake Superior* printed across a big area colored blue.

"Lake Superior is north of the United States," continued Father. "The first thing you must learn about a map is *direction*. Every map has a north, south, east, and west. The north is almost always shown at the top, and the south at the bottom. As you look at such a map, west is at your left and east at your right. So it is with the globe. When you are looking to the right on the globe you are looking toward the east, and when you are looking to the left you are looking west. The Equator and the smaller circles parallel with it show the exact east-and-west directions. The large half circles extending from pole to pole show the exact north-and-south directions. Is the Atlantic Ocean east or west of the United States?"

"East!" shouted Peter, as soon as he had located the Atlantic Ocean.

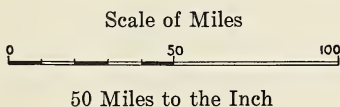
"Right!" said Father. "The next thing to learn about a map is *distance*. If you want to know how far it is from New York to Cleveland you can tell by reading the map." Jane and Peter looked puzzled.

"Take a ruler and measure the distance on a map from New York to Cleveland," Father suggested. Peter found a ruler and together he and Jane saw

that the dot for New York and the dot for Cleveland were about eight inches apart.

“If you will look at the scale of miles down in the lower left-hand corner of the map, it will tell you how many miles an inch stands for.”

Peter and Jane found the scale of miles. This is what part of it looked like:



“The scale of miles tells you that an inch on this map stands for about 50 miles,” Father explained. “No matter where you put your ruler on this map, an inch stands for the same number of miles. If there are eight inches between New York and Cleveland, then to get the number of miles you have to multiply the number of miles by the number of inches.”

“Oh, yes,” said Jane. “Eight times fifty makes four hundred. New York and Cleveland are about four hundred miles apart.”

“Very good!” said Father. “On this map of the United States an inch stands for 50 miles. On this map of North America an inch stands for 200 miles. On our globe an inch stands for 500 miles. Always remember,” Father repeated, “that on maps marked with a scale an inch shows about the same distance

at one place on the map as it shows at any other place on the same map."

"Now tell us why a map has different colors, will you, Father?" asked Jane, who still was puzzled about the many colors.

"The colors help us to locate places," Father explained. "Maps show not only direction and distance but also *location*; that is, they show where places are. Oceans and lakes are usually colored blue. For rivers lines are drawn, and on some maps dark, shaded places stand for mountains. The small black dots stand for cities and towns."

"What are the brown and yellow and red and green parts?" asked Jane.

"Those are the states," replied Father. "There are forty-eight states in our country, and this map shows you where each state is. States that are next to one another are marked with different colors so you can tell them apart more easily. Colors and marks are put on maps to help us to read more easily the ideas shown on the maps.

"You see," Father continued, "you can learn a great deal by reading maps. Remember that maps show direction, distance, and location. It's as much fun to read maps as it is to read books."

"Let's try to find places on the globe," said Jane, as Father turned back to his writing.

"All right," answered Peter. "Let us find San Francisco."

A Map Game

Go to a wall map of the world and play a game. Point to some of the places mentioned in this story and see if the class can tell what they are.

Making Maps

Make a map showing where your house and your school building are.

Mark the edges of the map North, South, East, and West.

If you live in a small town, locate each pupil's house in the town.

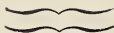
If you live in a city, have your map show the place where your school is located and its surroundings.

Be sure to draw streets correctly.

How Far?

Using the scale of miles on the map of the United States on pages 100-101, find the following distances:

1. How far it is from New York to San Francisco.
2. How far it is from New Orleans to Chicago.
3. How far your town or city is from the Atlantic Ocean.
4. How far your town or city is from the Pacific Ocean.



Things to Know about the Earth

The stories you have just read have told you some important things about the earth. Can you remember them?

1. The earth has the shape of a globe, or big, round ball.
2. On the earth's crust are continents and oceans.
3. Around the earth is a layer of air.
4. The earth turns slowly around and around, making day and night.
5. The earth travels around the sun, making spring, summer, autumn, and winter.
6. The globe is a model of the earth which shows us how the earth is shaped.
7. Maps tell us where places are, how far it is from one place to another, and which direction one place is from another.

Writing Poems

See if you can put some of the ideas of these stories into poems for your notebook. Here are three suggestions for names for your poems:

“What Old Mother Earth Might Say to Me”

“The Blanket of Air Keeps Me Safe and Warm”
 “A Song of the Seasons and How They Came to Be”

The Bulletin Board

Have you put some automobile maps on your Bulletin Board?

Testing Game

Complete the sentences below by saying the proper word or words at the place where a word or words have been left out. On a sheet of paper write the numbers 1 to 15, and after each number write the word or words needed to complete the sentence of that number.

1. A model of the earth is called a _____.
2. The earth turns around once in _____
_____.
3. When the place where you live is turned away from the sun it is _____.
4. The _____ side of a map is usually shown at the upper edge.
5. The longest east-and-west line running around the earth is called the _____.
6. The three things which make up the earth are:
(1) _____ (2) _____ (3) _____.
7. High up above the earth the air is _____.

8. When the water in the air cools off we have _____.
9. The layer of air on the earth's crust is about _____ thick.
10. Because the earth travels around the sun we have _____.
11. The earth's axis always points toward the _____.
12. The names of the seasons are _____, _____, _____, and _____.
13. Maps show three things: (1) _____
(2) _____ (3) _____.
14. We use a scale of miles to find _____ on a map.
15. The blue places on a colored map are usually _____.

Reading Time

People have always had ideas about how things began. Many of these ideas we call "myths." On pages 24-32 of Knowlton and Gerson's *Our Beginnings in the Past* you can find stories of the "Ancient Beliefs About the Beginnings." On pages 170-194 of Wells's *How the Present Came from the Past* you can find stories that tell what some primitive people still think about the beginnings of many things they see in nature.

If you will look on the shelves in the library marked Geography and Science, you can find many books that tell stories about the earth we live on. Some of them are listed on the following page.

Craig, Gerald S., and Baldwin, Sara E., *Our Wide, Wide World*.

Craig, Gerald S., and Johnson, G. M., *Our Earth and Its Story*.

Fenton, Carroll L., *Along the Hill*.

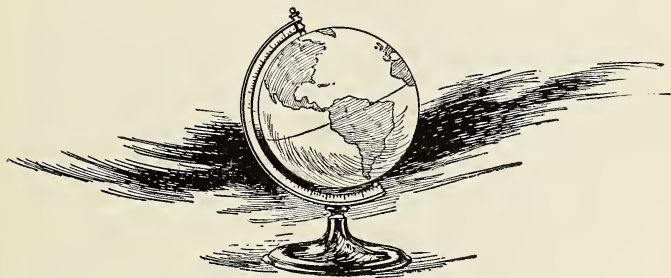
Heal, Edith, *How the World Began*.

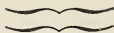
Knight, Charles R., *Before the Dawn of History*.

Rifkin, Lillian, *Our Planet the Earth; Then and Now*.

Rugg, Harold, and Krueger, Louise, *The First Book of the Earth*.

Small, Sidney A., *Boys' Book of the Earth*.





Plants and Animals on the Earth



A DINOSAUR

“Oh, Jane, look at this big fellow,” said Peter, pointing to a picture in a book called *Giant Lizards*. “This lizard is so long that he could reach up and eat the top of a big tree. It says here that he was eighty feet long and weighed forty tons.”

“Were there real giant lizards?” Jane asked.

“Yes, there were real giant animals,” said Father, looking over Peter’s shoulder at the picture. “Some were called *dinosaurs* (dī’nō-sôrz). They lived on the earth millions and millions of years ago. Would you like to hear a story about the animals that have lived on the earth?”

Peter and Jane said “Yes”; and Father began:

“Many hundreds of millions of years ago sunshine warmed the water in the lakes and oceans. Then very tiny green specks appeared in the water. Some people think these tiny round plants were the first living things. After a long time, some kinds grew larger; and in time, many plants grew in different shapes.

“Then some of the plants began to grow on land. As the ages went by, mosses and ferns appeared, and at last trees and flowers began to grow. Finally most of the land was covered with green plants.

“Soon after the first tiny round plants began to live, the first animals appeared in the water. They were very small and round like the plants. Then they, too, grew into different shapes and sizes. Jellyfishes were among the early animals. Then some of the sea animals began to grow shells. There were also sponges, corals, and starfishes. After more millions of years had passed, fishes with backbones and scales swam in the waters of the earth.

“Finally some of the living things in the water crawled out upon the land. They learned how to live on the land as well as in the sea. After a long time some of them began to grow legs and to live on the land all the time.

“By this time the ancestors of the grasshoppers, crickets, and beetles appeared. After more millions of years came the dinosaurs and other

giant lizards. Some of the lizards grew wings of skin. They had no feathers, but they could fly. One very large lizard is called the *finger-wing*, or *dragon of the air*. Its wings spread thirty feet through the air.

“Still later the ancestors of the birds with feathers appeared. At first they had teeth instead of bills. They were the first animals that had warm blood. More



Underwood & Underwood © Field Museum, Chicago

THE GIANT SLOTH was one of the early fur-bearing animals, three times as large as an elephant. Painting by Charles R. Knight, presented to the Field Museum by Ernest R. Graham.

millions of years passed by before animals grew fur on their skin. The first fur-bearing animals were the ancestors of the beavers, squirrels, dogs, and cats.

“At last people began to live on the earth. They lived long, long before the time of Og, and Siki, and

the Greek builder, and all the other friends whose stories you heard on History Hill.”

Using the Dictionary

Look in the dictionary to be sure you know the meaning of the word *ancestors*. Have you some interesting story to tell the class about your family ancestors, or the country from which they came?

Making a Dinosaur

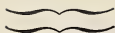
See if you can make a small model of a dinosaur. Make the skeleton of wire. Cover the skeleton with clay. You could have an exhibit of dinosaurs in your room. If you look in *Before the Dawn of History*, by Charles R. Knight, you will see just how the dinosaurs looked.

Among the Library Books

On pages 155-156 you will find the names of books you may want to read while you are studying more about the earth and how it helps to make our ways of living. Two books about ancient animals are:

Cormack and Alexander, *The Museum Comes to Life* (especially pages 129-162).

Mix, Jennie I., *Mighty Animals*.



The People on the Earth

Again Peter and Jane were standing before the globe. "What exciting stories we have heard about the earth," said Jane.

Peter agreed, and said, "I've been wondering about all the people who live on the earth now. There must be thousands and thousands of people in the world."

"Oh, I'm sure there must be millions and millions," said Jane.

"So now you twins are wondering about the people who live on the earth," said Father, as he looked up from the book he was reading. "I see that you haven't much idea about the number of people there are in the world. You don't count them by the thousand or even by the million, but by the billion. There are now about two billion (2,000,000,000) people living on the earth. Every minute there are about one hundred persons born. This year there are about twenty million (20,000,000) more people living on the earth than there were last year."

"Two billion! I can't imagine so many people!" exclaimed Jane.

"The other day you told us about a time when there were no people at all on the earth," said Peter.

"You are right, Peter," answered Father. "Shall I pretend that I am the globe again and tell you a story about the people now living on the earth?"

"Please do, Father," said Jane and Peter at once. And Father began the story:



A PRIMITIVE MAN reaching for food.

"The very early people on the earth many thousands of years ago are often called primitive or pre-historic—meaning 'before history began.' Their ways



© Capt. Bartlett, from Gendreau

AN ESKIMO FAMILY in the cold northern land of Greenland (map, page 120). Notice how different their clothes are from those seen on page 119.

of living were at first very different from ours, but slowly changed and became better as time went on. They could make stone tools. They could make and use fire. They could make clay jars and pots. They could draw very good pictures."

Father's voice sounded more than ever as if it came from the inside of the globe, as he continued: "All the people who live on the earth are really much more alike than they are different from one another. There are many differences, however, that we can see among the people living today. In the thousands of years that men have lived on the earth, they have wandered about from place to place. As they wandered, they met other people. Slowly people living in different parts of the world changed in appearance. One of the differences we can see most easily is in the color of their skin. Today we can divide the 2,000,000,000 people on the earth into three great groups: the white, the yellow, and the black.



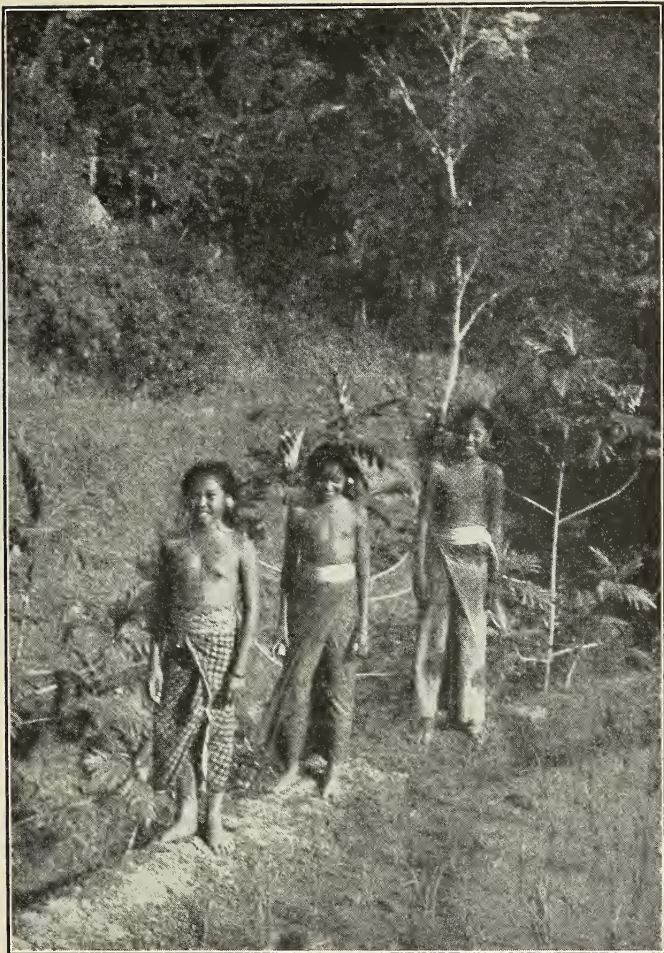
Which group of people does each of these men belong to? What likenesses and what differences do you see among them?

“Today, black, and yellow, and white people can be found in most of the countries of the world. But most of the white people live in Europe, the southern part of Asia, and America. Most of the yellow people live in China and Japan; but the Indians of America are also a part of the yellow group. Most of the black people live in Africa. (Can you find Asia and Europe and North and South America on a map or on a globe?)

“It has been interesting to watch all the people on the earth making their ways of living. The Lapps of the cold lands and the Bedouins of the hot deserts live very differently from the way the people of the United States live. Where people have been shut off from other people, the ways of living have changed very, very slowly. In most of Europe, America, and parts of Asia, people have changed their ways of living very fast in the last two hundred years. As you learn more about the earth, you will find that the place where people live helps to make their ways of living.”

Pictures to Cut Out

Find newspaper pictures of black people in Africa, yellow people in Asia, and white people in Europe or America. Cut out pictures showing how the people look, how they work, and what kinds of houses they have.



Gendreau

GIRLS OF THE YELLOW GROUP beside a rice field in the hot climate of the East Indies.



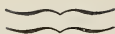
THE WESTERN HEMISPHERE

This map shows the half of the earth which is often called the *Western Hemisphere* or the *New World*. Can you answer these questions? How many continents are in the Western Hemisphere? What are the continents called? Which is the larger? Through what continent does the Equator run? Is Central America north or south of the Equator?



THE EASTERN HEMISPHERE

Let each pupil in the class write down a question about the map of the Eastern Hemisphere. He can write such questions as "How many continents are there in the Eastern Hemisphere?" or "Which is larger, China or Japan?" Let each pupil read his question to the class. See how many know the answers to all of the questions asked.



Where the People on the Earth Live

"There are about 2,000,000,000 people on the earth!" repeated Jane, as she and Peter stood before the globe the next day.

"I've been wondering about all these people," said Peter. "I should like to know where they all live."

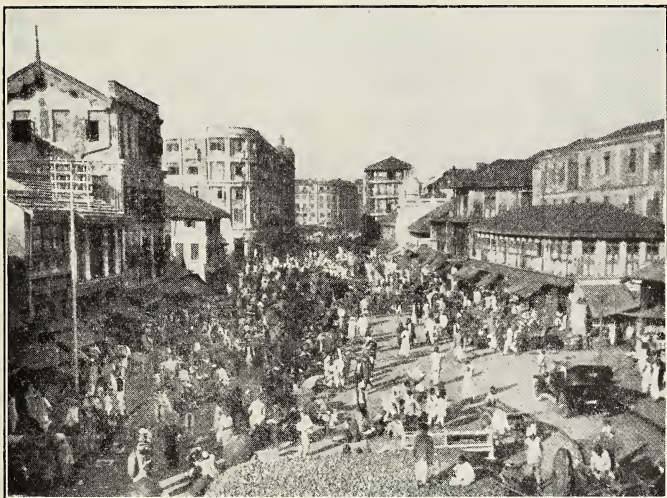
"Shall I show you where most of the 2,000,000,000 people live?" asked Father when he heard Jane and Peter.

Both children nodded their heads, and Father began to point to places on the globe. "It is so cold and icy near the North Pole and near the South Pole that no one can live there," he said as he pointed to the regions around the poles. "A few people, such as the Eskimos and Lapps, however, have learned to live in the very cold regions near the Arctic Circle, not very far from the North Pole."

Father pointed to the dry regions in northern Africa, southwestern and central Asia, and parts of western America, and said "Only a very few people live in the dry regions of the world. Mountain regions are not good places for men to live in, either. On much of the land of the globe, there are really very few people.



In Lapland, near the Arctic Circle, where few people live.



Ewing Galloway

In a city in India, a warm land where many people live.

“Wherever many people live together on the earth,” continued Father, “it must be warm enough and wet enough for the people to raise food and live comfortably.”

“Where are the lands that are warm enough and wet enough?” asked Jane, as she and Peter looked closely at the globe.

Father turned the globe and pointed to the eastern half of the United States. “Here,” he said, “the climate and soil help millions of people to live and work. You know that many people have come from Europe to settle in this part of the world. On the farms millions of people raise food. In the north-eastern part of the United States and near the Great Lakes millions of people live by making things in factories and carrying on trade. Many people also live along the Pacific coast of the United States.”

Father now turned the globe and pointed to Europe. “Europe has even more people than the eastern half of the United States,” he said. “In Europe there are many farms and many busy workshops and factories. Most of the farms in this part of the world are small and very carefully tended.”

Father turned the globe again and pointed to southern and eastern Asia. “Here we find three countries where many people live,” he said. “In India, where the climate is warm and there is much rain,

millions of people live. Farther east in China and Japan still more millions of people live. In the fertile river valleys and on the plains of China there are three times as many people as there are in the United States. In Japan are many cities and factories. In both China and Japan millions of men, women, and children work long hours to make small patches of ground grow as much food as possible. The three countries, India, China, and Japan, have more than one third of all the people of the world."

Father pointed to other places along the seacoasts of the world to show where many people live. Then once more he quickly pointed to the three places where most of the people of the world live. "In the eastern half of the United States, in Europe, and in southern and eastern Asia, the climate and soil are very good. Most of the 2,000,000,000 people on the earth live and work in those lands," he said as he gave the globe a last twirl.

Questions to Answer

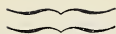
Can you find the answers to these questions?

How many people live in the United States? How many people live in your state? How many people live in your county? How many boys and girls are there in your school?



Locate on this map all the continents and oceans. Point to Japan, China, India, Egypt, France, England, the United States.

As you look at this map, what continents do you think have the most people? What continent has the fewest? What part of the United States has the most?



Mountains—the Earth's Big Walls

Peter and Jane and their father were playing a game with the globe. Peter shut his eyes while Jane turned the globe. When it stopped, he put his finger on it. Then he opened his eyes to see what spot he had touched. Next Jane shut her eyes and Peter turned the globe for her to touch. She opened her eyes to see where her finger pointed. Then Father told them what they might see if they were really at the spots they had touched on the globe. Already he had told them about camels on the hot, dry land of the Sahara (sà-hä'rà), a ship on the Indian Ocean, and an iceberg in the Arctic Ocean.

"It is your turn now, Peter," said Jane.

Peter shut his eyes so tight that his nose wrinkled. When he opened them, his finger pointed to the long chain of mountains in western North America. Then Jane tried, and her finger pointed to the Alps in southern Europe.

"Should you like me to tell you how mountains help to make people's ways of living?" asked Father.

"Oh, yes!" cried Jane and Peter together.

"Very well," said Father, sitting down beside them and beginning his story. "The highest places



CHIEF MOUNTAIN RANGES OF THE WESTERN HEMISPHERE

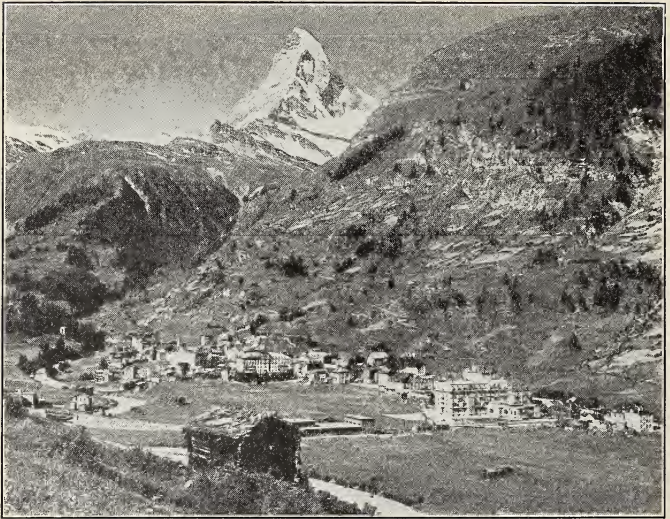
on the earth's rocky crust are called *mountains*. In many places there are long rows or ranges of mountains, like hills, but very much higher and very much longer. They are often very beautiful. On their lower slopes there are thick forests or grassy fields covered with flowers. Higher up it is colder, and the trees are smaller and farther apart. Higher still, where the soil



CHIEF MOUNTAIN RANGES OF THE EASTERN HEMISPHERE

is thin and stony, only grass and low shrubs can find room for their roots. On the highest parts of the highest mountains there is nothing but snow and ice the whole year round. Some parts of many mountains are so steep that they are bare rock.

“If you were living among the mountains that Jane touched on the globe, you might find that you



A VALLEY IN THE ALPS. How do the mountains help to make the ways of living of the people in the valley? What mountains have you seen?

did not have many neighbors. In some parts of the Swiss Alps there are villages so high up the mountain-sides that the villagers seldom get down into the fertile plains where busy cities are. Instead, they stay up on their mountain, taking care of their cattle during the short summer. They cannot have good gardens, for the warm season is too short and there is not enough soil. They do not see many other people, for the high peaks and deep valleys make it difficult to get from place to place.



Tom Gill, U. S. Forest Service

MOUNT BAKER, in the state of Washington. Mountains like these are harder to climb than walls. How would you like to find a path through deep valleys and over snow-covered peaks? What dangers would you meet? Would automobiles help you?

“In some ways mountains are like walls. A high mountain range separates the people who live on one side from the people living on the other side. There are only a few places, called *passes*, where men can get across a high mountain range. When the early settlers in our country started to go west across the Appalachian (ăp-ă-lăch'ĭ-ăn) Mountains, they had to travel along trails that led through the passes.

“Because mountains are like walls, they are often the boundaries between countries. They protect each country from the other. Let us see how many mountain boundaries we can find on our maps. The Andes (ăn'dēz) Mountains stand between Chile (chē'lă) and Argentina (ăr-jěn-tē'nă) in South America. (See the maps on pages 120 and 128.) The Himalaya (hĭ-mă'lă-yă) Mountains separate India from Tibet (tĭ-bět') in Asia. Part of the Alps divide Italy from France. The Pyrenees (pĭr'ĕ-nēz) cut Spain off from France.

“Mountain walls are sometimes good and sometimes bad. When mountains make too strong a wall, men cannot exchange goods and ideas across them easily. A country shut up within a wall of mountains is somewhat like a person who is shut up within a wall of bricks and does not know much about the busy world outside.”

Jane and Peter had listened very carefully to what Father had been telling them. Now Jane asked a

question. "Is being a wall the only thing a mountain does to help make our ways of living?"

"No," said Father. "Mountains help to make the climate of some countries. The mountains that Peter pointed to in western United States help to make the climate of that part of our country."

"How, Father?" asked Peter, looking puzzled.

"Because, Peter, the mountains are so high they are in the way of the winds that blow from the west, where most of our weather comes from. The winds have to climb to get over the ranges, and the air gets colder as it climbs. This makes the water it is carrying from the Pacific Ocean fall as rain on the western slopes. By the time the winds have risen high enough to get over the ranges, they have little water left for the eastern side of the mountains. They are dry winds by the time they reach the eastern side—so on that side there are dry regions where it is hard for animals and plants to live.

"Mountains do one very good thing for us," continued Father. "They have in them many minerals. In the Appalachian Mountains coal and oil and iron ore are found. In the Rocky Mountains gold, copper, silver, and iron ore are found. Men dig mines deep into the mountainsides to get these useful minerals."

"I never knew mountains did so much for men," said Peter.

"Neither did I," Jane agreed.

These are the ideas that Jane and Peter learned about mountains:

They act as walls or barriers to trade.

They protect one country from another.

They help to make the weather of the land near them.

They give us useful minerals, such as iron and coal.

Map Time

Make a list of the mountains named in this story. Point to them on a wall map of the world.

Your teacher will give you an outline map of the world. Print on it very neatly the names of the following mountains:

Rocky Mountains

Alps

Appalachian Mountains

Pyrenees

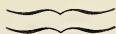
Andes Mountains

Himalaya Mountains

Make a sand-table map of the mountains, rivers, and valleys in your community or in your state.

A Summary

Did you notice the four-sentence summary at the end of this story? Copy it into your notebook under the heading of "Mountains."



Living on Plains

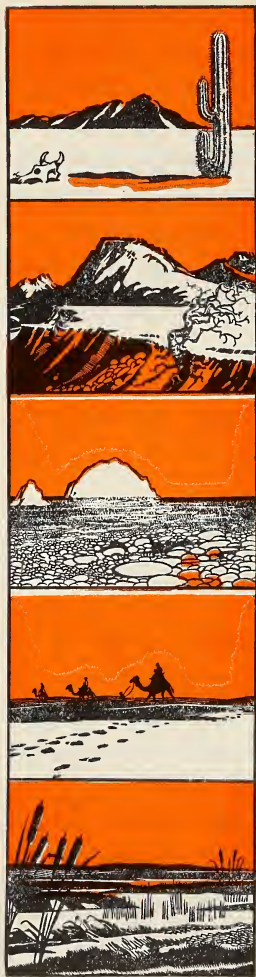
One day not long after Peter and Jane had heard the story of the earth's mountains, they were looking at the globe again.

"If only a few people live on mountainsides," said Jane, "I suppose that most of the people of the earth live on level places."

"That's right, Jane, they do. But not on all the level places!" It was Father who spoke, and the twins eagerly listened for the story that he had to tell them.

"You know there are different kinds of level places on the earth," began Father. "Some are *deserts*, and they are so dry that not many people live on them. Other level places are called *plateaus*. A plateau is a level stretch of land which is high. A plateau is like a mountain range sawed off halfway up its slope. Plateaus often make good grazing land, but usually not many people live on them.

Another kind of level place is called a *plain*. Plains are low, level stretches of land. If plains get enough rain and enough warmth to make things grow well they are good places to live on. Most of the people of the world live on plains."



"Are there any plains in the United States?" asked Peter.

"Oh, yes," answered Father. "There are all kinds of plains in our country. The most important plain in the United States is the Great Central Plain. Imagine that I am the Great Central Plain talking to you now. I might say—

"I am the Great Central Plain of North America. I cover most of the area between the Appalachian Mountains in the east and the Rocky Mountains in the west. South of me is the Gulf of Mexico, and I reach to the north far up into Canada. (Look at the maps on pages 120 and 128.)

"On my many millions of acres live millions of people. And I help to make their ways of living.

The pictures on this page show parts of plains where no people live. Some are too cold or too dry, some have poor soil, and some are too swampy.

“Year after year farmers plow and sow and harvest crops on my rich soil. In my flat fields corn and wheat and other grains grow much better than in hilly, rocky country. I have the largest farms in the world. In my western part great herds of cattle and sheep eat my grass and hay. I help many people to earn their living. I make it possible for you to have certain kinds of food.

“Because my surface is so flat it is easy to build railroads on me. Trains move swiftly across the plains. Concrete roads for automobiles are easier to build on me than on the mountains. Broad rivers flow slowly through me, making water-roads for boats. Day and night many people are busy carrying goods over me.

The pictures on this page show parts of plains that are used by people for farms and pastures. What kinds of farms have you seen?



“Cities and towns appear on my surface. Between Cincinnati (sĭn-sĭ-năť’ĭ) on the east, Denver on the west, Minneapolis (mĭn-ĕ-ăp’ô-lĭs) on the north, and New Orleans (ôr’lĕ-ănz) on the south, are many fine towns and cities.” (See the map on pages 100–101.)

* * * *

Father’s voice stopped. Peter and Jane were looking closely at the part of the map called the Great Central Plain. They could almost see the farmers plowing, the long freight trains moving from city to city, and people working in the cities.

“Are there any other important plains, Father?”

“Yes, there is a long plain between the southern part of the Appalachian Mountains and the Atlantic Ocean. This plain made it easier for the first settlers in our southern states to grow grain and build towns and trade with one another. There are rich valleys like plains farther north, and between ranges in the Appalachian region. There are wide valleys and plains west of the Rocky Mountains, too. In Europe there is a great plain which covers most of France and Germany and Russia. It is partly because of this large plain that so many people live in Europe. India, in southern Asia, has great plains which make living easier for the people there. And one of the largest plains of the world is in China. Millions of people live on these plains.”

It would be interesting if all the plains in the world could tell us about themselves. They would tell us how they help people to earn their living, and to build their cities and railroads.

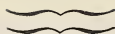
Using Maps

How many of the cities of the United States shown on the map on pages 100-101 are on plains? Are there any large cities of our country located in mountain regions?

Perhaps your teacher will give you an outline map of the world. On it, color the plains which are mentioned in this story.

Finding the Main Idea

Write in one sentence what you think the main idea of this story is. When your class members have agreed on the best sentence, copy it into your notebook.



The Story the Rivers Told

Peter and Jane had a new book of maps open in front of them. They were looking at a bright map of the world. "How many rivers there are!" exclaimed Peter, pointing to the many winding lines on the map.

"This is the Nile River that Siki told us about," said Jane as she traced the black line with her finger.

The twins did not know that Father was standing behind them. When they heard his voice it almost seemed as if the Nile River itself spoke to them.

"I am the River Nile," said Father's voice. "You can see that I begin in a lake in the eastern part of Africa. I flow between the mountains. I wind across the plains. I twist my way through the hot dry desert and carry my waters to the Mediterranean (mĕd-ĭ-tĕ-rā'nĕ-ăn) Sea.

"You have heard how mountains and plains help to make your ways of living. Now I want you to know how important rivers are! In my waters I carry rich soil from the mountains. Once every year I overflow my banks and spread good soil on the fields of Egypt. My water is used to make crops grow. I am so important that men often call Egypt 'the gift of the Nile.'"

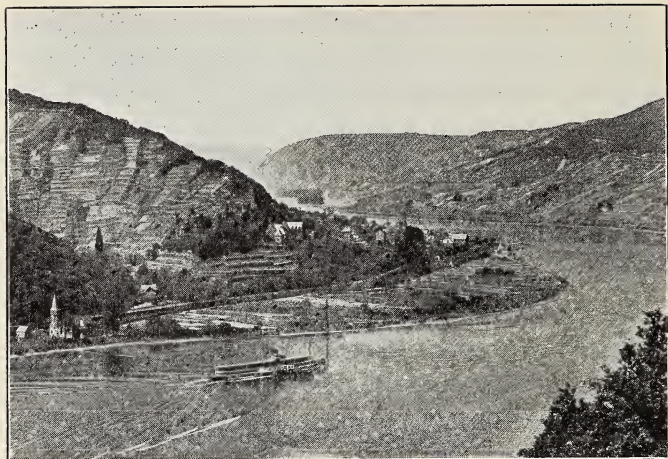
Then Father pointed to Europe on the map. "Now, Peter and Jane, I'll tell you how some of the rivers of Europe help to make the ways of living of the people there." There was a pause, and then Father's voice began again.

"I am the Danube (dăn'ūb) River. I begin in a little mountain stream in the Black Forest of Germany. I flow into the Black Sea, far to the east. (Map, page 30.) Boats sail on me and carry goods from place to place. Great cities have grown up on my banks. I am one of the most important waterways of all Europe. I have made some countries rich. Countries have fought over me.



Ewing Galloway

DANUBE RIVER at Budapest in Hungary. How do you think the Danube River helps to make the ways of living of the people there?



THE RHINE is one of the most important rivers in the world. In this picture you see a boat on the Rhine. Notice the hills terraced for farming, and the village which has grown up on the banks of the busy river.

“Some of the other important rivers in Europe are the Rhine in Germany, the Rhone in France, the Thames (tēmz) in England, the Volga in Russia, and the Po in Italy. On all of these rivers boats carry goods from place to place. On their banks the rivers help thousands of people to earn their living.”

Father reached over Peter's shoulder and turned the pages of the map book until he found a map of North America. He pointed to a long river in the middle of the continent, and said, “I am the Mississippi River. Listen, and I shall tell you of some

of the rivers of North America, and what they do for the people who live there.

"I begin, or have my *source*, in the northern part of the state of Minnesota. I end, or have my *mouth*, in the Gulf of Mexico into which I flow. Several other large rivers join me on my journey from Minnesota to the sea. These rivers are called my *tributaries*.

"One of my tributaries is the Ohio River. The Ohio River has its sources in the Appalachian Mountains. It helped the early Americans to settle the great West. Many of the settlers floated down the Ohio



PART OF THE OHIO RIVER—one view in the early days when it carried many flat-bottomed boats, and the other in recent times, showing steamboats and bridges at the great city of Pittsburgh, in western Pennsylvania.

River in flat-bottomed boats to get to the fertile fields of the Great Central Plain.

“My largest tributary is the Missouri (mǐ-zōōr’i) River. If you measure me from the source of the Missouri to my mouth you will find that I am the longest river in the world. On my journey southward I furnish water power for many factories. I am deep enough, wide enough, and smooth enough for boats to steam upstream and downstream in my waters. They carry goods from the northern part of the United States to the very southern part. Some of the largest and richest cities in the United States have grown up on my banks.

“Another important waterway in North America is the St. Lawrence River. It is the outlet of the Great Lakes. Wheat, copper, and iron ore from Minnesota and Michigan (mǐsh’i-gǎn) can be sent down the St. Lawrence River to the Atlantic Ocean. There they can be sent by ships all over the world.

“In the western part of the United States is the Colorado River. Its rushing waters have carved out one of the most beautiful stone canyons in the world, the Grand Canyon of the Colorado.

“The Columbia River, in the northwestern part of the United States, begins in the Rocky Mountains and flows into the Pacific Ocean. In its clear waters people catch many, many salmon. Near the mouth of



IN THE GRAND CANYON OF THE COLORADO RIVER. The high, steep canyon walls are of bare rock. The river has cut its path through the rock for many miles.

the river are great canneries, where salmon are canned, to be sent all over the country for people to eat.

“There are many other important rivers in the United States and in the rest of the world. Some of the rivers are waterways for trade. Others furnish water power for factories. Others give us fish to eat. The water from some of these rivers is used to make crops grow. Some rivers are boundaries between countries and between states.”

Father closed the map book, as he said, “Do you see how much rivers help to make our ways of living?”

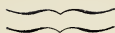
Peter and Jane nodded their heads. They were thinking of canoes and flatboats and steamboats, and of how much fun it would be to take a trip on the river highways of the world.

Learning about Rivers

You will want to write the names of the rivers mentioned in this story on an outline map of the world and in your notebook.

Perhaps you would like to play the Map Game again. You have learned so many new ideas about the earth that you can point to many more places now. Can you ask some questions, too, about the map to see if your classmates can answer them?

Add the new word *tributaries* to your word list.



The Blue Parts of the Globe

Peter and Jane were making maps.

"Have you any more blue paint, Peter?" asked Jane.

Peter shook his head. "No," he replied. "I used the last to color the Pacific Ocean. It's a big ocean, you know."

"That's just the trouble," said Jane. "Oceans take up so much space on the map that I don't see how we can finish our maps without more blue paint."

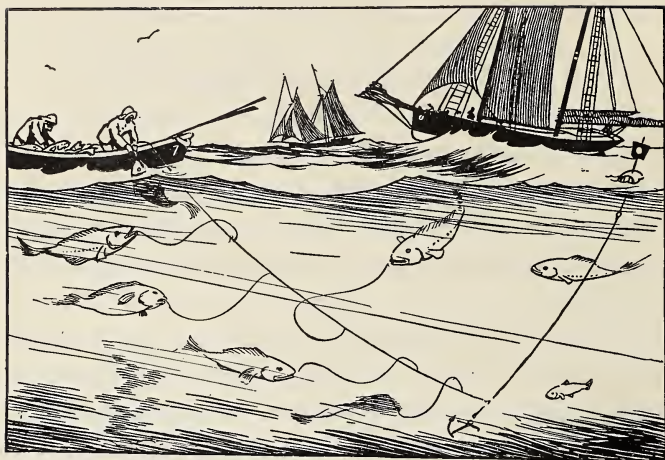
"I believe that I have some paint you may use," said Mother. "Here you are. Oceans are certainly important enough in our lives to deserve all the blue paint you can give them."

Jane thanked Mother for the paint. Then she said, "Why are oceans so important, Mother?"

Mother smiled. "I have just been reading," she said, "about the fleets of fishing boats in the North Atlantic Ocean. I can tell you at least one way in which the ocean is important."

"Oh, I know," said Peter. "It gives us fish for food."

"Yes," said Mother. "Fishermen come from long distances—even from Europe—to fish in the famous fishing grounds of the North Atlantic. And all over



FISHING IN THE NORTH ATLANTIC

the world thousands of people earn their living by catching fish in all the oceans. Men use other things they get from the ocean, too. They get cod-liver oil from the codfish, and fur from seals. They get pearls out of oysters, and ink out of squids, and fertilizers and iodine out of seaweeds.

“But that is only one way that oceans have helped to make man’s ways of living. The kind of coastline where the oceans meet the land is also very important. There are many kinds of coastlines. Some coasts have good harbors where ships can land easily and safely. Others make it hard for ships to land. Because ships are needed for men to carry goods and ideas



Courtesy Canadian National Railways

FISHING BOATS IN A HARBOR on the Pacific coast of Canada.



from country to country and from port to port, the kind of coastline is very important. A sandy beach where you could go swimming would not protect ships from winds and waves during a storm. A rough, rocky coast where there are many small islands and shallow waters is not good, either. Deep, sheltered bays, where the waters are quieter than in the open ocean, make the best harbors. Around such harbors busy cities are built. New York and San Francisco are great partly because they have such fine harbors. Look at your map that shows where most of the people of the world live (page 126). See how many people live in places where the water meets the land.

“Water makes great paths. Rivers and lakes and other

The pictures on this page show a lighthouse at a dangerous place on the coast, the seashore of a tropical land, a rocky coast, and a sandy beach.

bodies of water are paths because it is easier for men to get from place to place in boats than it is by land across mountains or deserts. The Phoenicians (fē-nīsh'ānz), who lived in ancient times in western Asia, used the Mediterranean Sea as a path to reach the western shores of Africa and Europe. The Great Lakes were paths for the French explorers of America. Great oceans such as the Atlantic and Pacific are also used for paths. The wide stretches of water once kept countries apart, but today many parts of the oceans are busy highways. Hundreds of ships sail back and forth, carrying goods and ideas. We call the paths or routes these ships follow, *ocean lanes*.

"There is still another way that oceans help to make men's ways of living," continued Mother. "Do you remember how rain is made? Oceans give moisture to the air. The air carries the moisture to the land and lets it fall as rain. And oceans do more than this. Large bodies of water take a long time to change from warm to cold and from cold to warm. In winter the ocean holds for a long time the heat it received from the hot summer sun. The water warms the air above it, helping to keep the land along its shores warm. In the same way the ocean in early summer is cold from the winter ice and snow. You go to the seashore in summer to enjoy the cool ocean breezes."

“Will you name again the ways the oceans help to make our ways of living?” asked Jane, as Mother paused.

“Yes. Oceans give us food and other useful things that live in the water,” Mother began. “Harbors help people to trade. Bodies of water make good roadways for ships. Large bodies of water help to make our climate by making the air moist and by holding heat and cold.”

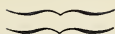
Jane looked down at the map she had colored. A large part of the map was painted blue for the lakes and oceans of the world. “Whenever I look at my map,” she said, “I shall remember how large bodies of water help to make our ways of living.”

Finding out More about Oceans

Color the large bodies of water on your outline map blue. Name the oceans and largest lakes.

If you can find a large white or wooden ball, you can make a colored globe by painting the oceans and continents on it.

Under *Oceans* in your notebook write the names of the oceans of the earth. Add to this a four-sentence summary telling in what ways the oceans help to make our ways of living.



How the Earth Helps to Make Our Ways of Living

In the first stories of this book Peter and Jane learned that part of our ways of living come from the people who lived long ago. In the stories you have just been reading, Peter and Jane learned that part of our ways of living come from the earth we live on.

They learned that the earth is a great round ball. On its surface live about two billion people. The earth gives these people air to breathe. The turning of the earth gives them day and night. Its journey around the sun each year gives them spring, summer, autumn, and winter. The earth gives the people rich soil and rain to make crops grow. It gives them water to drink, and oceans and rivers to fish in.

If we live where it is cold, we wear warm clothes. If we live where it is warm we wear cool clothes. In one season we may go ice skating, and in another season roller skating. In some parts of the earth people earn their living by farming; in other parts they earn their living by mining or by fishing or by sailing ships or by working in cities.

No matter what we do or where we live, the earth always helps to make our ways of living.

A Guessing Game

Imagine you are a mountain, or a river, or the air, or some other part of the earth. Tell some important things about yourself and see if the class can guess who you are.

Writing a Play

Can you write an interesting play about how the earth helps to make our ways of living? Some of the characters in the play might be the parts of the earth. They could tell who they are and how they help to make our ways of living. Other characters might be the plants, animals, and people of the earth. The stories of this Unit will help you to choose your characters and decide what each one of them shall say. Can you make costumes and give your play in the assembly hall of your school?

A Trip

Do you live near a river, a mountain, or one of the large bodies of water? Perhaps your teacher will take you to see it. Try to tell how it helps to make your ways of living.

Testing Game

Stories 9, 10, 11, 12

Who Am I?

1. I am like a large ball, and I travel around the sun.
2. I am a low, level stretch of land.
3. I give you moisture which air turns into rain.
4. I protect one country from another.
5. I give you fish and seals and pearls.
6. Many minerals are taken from my depths.
7. I have a source, a mouth, and tributaries.
8. I am used as a highway for smaller boats.
9. My surface is flat; my soil is deep and rich.
10. My surface is flat, and covered with sand.

Perhaps you can add some more sentences to your testing game and ask your classmates to guess who you are.

Reading Time

Here are more books to add to those you already know that tell stories about the earth.

Carpenter, Frank G., *Around the World with the Children.*

Craig, Gerald S., and Hurley, B. D., *The Earth and Living Things.*

Hillyer, V. M., *A Child's Geography of the World.*

McCreery, J. L., *Exploring the Earth and Its Life in a Natural History Museum.*

McNab, Allan, *The Picture Book of Rivers.*

MacPherson, W. M., *A Picture Geography for Little Children.*

Mix, Jennie I., *Mighty Animals*.

Unit Study Books, No. 403: *Hot Dry Lands*.

Whitnall, Harold O., *A Parade of Ancient Animals*.

Talking Time

On pages 104-111 of Carpenter's *Around the World with the Children* there is a story of life in the mountains of Switzerland. A story of how the Dutch live on their plain is on pages 117-128 of the same book. On pages 112-116 the story of the Rhine, a great river, is told. "The Five Great Oceans" is the name of the story on pages 83-84. Perhaps you would like to tell one of the stories to the class.

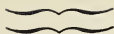
Tell the class the most interesting story you have read from the library books while you have been learning about the earth. Try to tell the story so well that other pupils will want to read the book.

UNIT III



LIVING IN GROUPS





Home

It was Father's birthday. Every few minutes Peter and Jane ran to the window to see if he was coming home. Outside the snow made a crunching noise as people passed along the walk. In the house it was warm and cozy. Mother had set a table beside the fireplace in the living room. Between trips to the window Peter and Jane laid the white cloth, put the knives, forks, and spoons in their proper places, and poured water in the glasses.

Jane was very much excited. She could hardly wait until Father came. She had knitted a pair of ear muffs for his birthday present. Peter had made him a toothbrush holder at school.

At last Father came up the street. With shouts of "Happy Birthday, Father! Happy Birthday, Father!" the children opened the door. Father stamped the snow from his shoes.

"Well, isn't this a nice surprise!" cried Father. "I had forgotten it was my birthday."

Credits: *American Museum of Natural History; Ewing Galloway; E. M. Newman, Publishers' Photo Service*

In the pictures on the opposite page you see homes of families in different parts of the world: Indian huts of bark, a jungle village in Africa, houseboats in China, houses in a Japanese city, and a modern American apartment house.

While Father was taking off his coat he saw that Jane was holding her hands behind her back. "This looks like a secret," he said.

"It's a surprise," Jane replied. "I was going to give this package to you after dinner, but I couldn't wait. Open it, Father."

"I'll get my present, too," said Peter.

Father opened both packages and smiled with delight. "These are just the things I needed. Now my ears won't freeze in the cold weather. And as for my toothbrush, I'm sure I'll never lose it again."

Peter and Jane laughed. Just then Mother called them all to help her carry the food from the kitchen to the table. Father carried a platter of meat, and Mother came with the bowl of potatoes. Next came Peter with carrots and peas, and last of all came Jane with the bread and butter.

"Isn't it pleasant beside the fire?" asked Mother.

"Yes," answered Father and Peter and Jane together. And Peter added, "Isn't home nice!"

Jane was very quiet for a moment. "What are you thinking about, Jane?" asked Father.

"I was wondering if people have always had homes," Jane replied.

"There are many interesting stories of how people began to live together and of how homes began," said Father. "But what do you think a home is?"

"Well," said Jane, looking around, "a home is a house to live in."

"It hasn't always been a house. Many thousands of years ago people lived in caves. Caves were the first homes."

"Yes, and people often live in tents," said Peter.

"The little savage boy in some parts of Africa lives in a small hut set on top of long poles, or on the branches of a tree," said Father. "He has to go up and down on a ladder. At night the ladder is drawn up, so that wild beasts cannot get into the hut. You will have to think again about what a home is, Jane."

"A home is a place to stay in. It has rugs and furniture and lamps," said Jane. "It has a warm fire in cold weather, and plenty to eat."

"Many homes are partly that," Father agreed. "These things all make our home pleasant and comfortable to live in."



Tents and huts that some people use as homes.



Can you tell how members of this family help one another?

“A home is a mother and father, and children like Jane and me,” Peter decided. “No, it isn’t just that, either. Robert lives with his Aunt May and Uncle William, but he has a home, too.”

“You are describing a family,” said Mother. “We are a family. A family is a group of people closely related to one another. Usually the members of a family live together in one home.”

“A home means working and playing together, as Mother and Father and Peter and I do,” Jane added.

“I think you are right, Jane,” Mother replied. “Now we’ll have the birthday cake, and clear the table. Then perhaps Father will tell us a story about the kinds of homes other people have lived in.”

Everybody enjoyed the birthday cake. Then all the dishes were carried to the kitchen. Soon the family were sitting beside the fireplace in the living room. Outside, the wind was blowing, but inside, the room was warm and comfortable. "I'm glad we have a home to live in," said Peter just before Father began to tell his story.

The Bulletin Board

By this time you have learned where to look for interesting pictures. You will find many to put on your Bulletin Board while you are studying how men have learned to live in groups.

Your Notebook

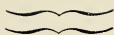
How did your notebooks for "History Hill" and "The Earth We Live On" turn out? Can you think of some ways in which they could be made better? Perhaps you would like to make a notebook for this unit, using your new ideas.

Making a Summary

Write a summary sentence or sentences telling in your own words what you think a home is.



Compare this family with the one in the picture on page 162. How did the members of this family help one another?



A Family That Lived in a Cave

“Where do you want me to begin?” asked Father, settling himself in his chair.

“I’d like to hear about the first homes, wouldn’t you, Jane?” said Peter.

“Yes,” said Jane, “please tell us about a home in a cave.”

“I’ll tell you about Bo-Bo.”

“What a funny name!” said Jane and Peter.

“Isn’t it? I’m not at all sure that Bo-Bo was his name. We know so little about the very early cave people. All we know of them we have learned from bones and tools, and from some of the pictures which they drew on the rock walls of their caves. They could not write, but they made some very interesting pictures.

“Bo-Bo’s family had a very hard life. There were many times when Bo-Bo was both hungry and cold. For clothing he wore the skins of animals. At night he slept on the cold cave floor. But Bo-Bo’s family probably were all willing to share what they had. Perhaps Bo-Bo, because he was the smallest, sometimes got the best piece of meat, or the extra bear-skin to wrap around him at night.

"Almost every day Bo-Bo's father and brothers went hunting. Sometimes they came back with nothing at all, and then everyone was hungry. Often they caught only small rabbits. But sometimes they were able to kill a large animal. Once in a while they killed a buffalo. They dragged it back to the cave, and for several days the whole family feasted.

"Bo-Bo wanted to grow up quickly so that he might be allowed to go hunting. Every morning he asked his father if he was big enough yet. And every morning his father would say, 'No, my son, not until you are tall enough to touch the first branch of that tree, and not until you are strong enough to lift that stone by the fire at the entrance to the cave.'

"So Bo-Bo stayed at home with his mother and sisters. He gathered berries and nuts and helped to keep the fire burning. Fire was hard to make, and the family tried never to let their fire go out.

"One day while his father and brothers were out hunting, Bo-Bo tried to lift the stone by the cave and found that he could. Then he ran to the tree. By standing on his toes and stretching, he was able to touch the branch with the tips of his fingers. 'Look, Mother!' he cried, 'How tall and strong I am! Tomorrow I'm going hunting.'

"Bo-Bo thought the day would never end. He played running and jumping games with his sisters,

helped his mother carry water, and gathered wood for the fire.

“In the afternoon it began to rain, and Bo-Bo and his sisters were glad to creep into the cave and sit by a new fire there. Still Bo-Bo’s father and brothers did not come home. Bo-Bo began to feel very hungry, but he would not cry. He was a man now, and would go hunting with the other men.

“Suddenly a great streak of lightning struck Bo-Bo’s tree. The thunder crashed and rumbled. All the children crept closer to their mother. She raised the skin curtain in the cave door so that the light from the fire would shine out and guide Bo-Bo’s father and brothers. From time to time she called, but there was no answer except the howl of wild animals.

“At last there was a great shout. Bo-Bo’s father and brothers were coming home, dragging the biggest buffalo Bo-Bo had ever seen.

“Bo-Bo was so glad to see them that he almost forgot that he was hungry. His mother began to strip the skin from the animal with her stone knife. Soon all were sitting around the fire eating and listening to the story of the day’s hunt.

“Bo-Bo’s brothers jumped up and began showing how the buffalo had been killed. The buffalo had fallen into a pit and could not get out. They attacked it from all sides. They threw stones and spears at it.



Do you have to work hard to get meat home for your dinner?

The buffalo fought fiercely, but at last it was killed. Then they had the hard work of dragging it home.

“Bo-Bo’s eyes were shining with excitement at the story of the hunt. He was no longer afraid of the thunder and lightning and the animals that howled in the forest. His father and brothers were there to protect all the family.

“‘When you go hunting again,’ said Bo-Bo, ‘I’m going with you. I can lift the stone, and I can touch the branch of my tree. I did it today before the rain began.’”

"I like Bo-Bo," said Jane, when Father had finished his story.

"So do I," said Peter, "but I'm glad we don't have to sleep on a cold floor and be afraid of wild animals."

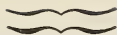
"We have a much better and easier life," said Father. "The cave family was able to protect its members from cold and wild animals, and to feed and clothe them. Members of the family were pleasant company for one another. In Bo-Bo's family we see the beginning of group life and of co-operation, or working together. Very slowly people learned to live together in larger groups. When they were able to live and work together, life became easier and pleasanter. If you like, we'll talk about living together again tomorrow evening. Perhaps Mother will tell us a story then."

Drawing Time

Draw a picture of Bo-Bo's home and family. Place it next to the picture of an American home and family on the Bulletin Board. Label one picture *Civilized Living*. Label the other picture *Primitive Living*.

Writing Time

Write a short story called "Why I Am Glad that I Am Not Bo-Bo."



Guti, the Goatherd

The next evening Peter and Jane were anxious to hurry through with dinner so they could sit by the fire and hear the story Mother was to tell.

“Last night Father told us about *one* family living and working together. I should like to know how several families came to live together in the same place,” said Peter.



By Burton Holmes, from Ewing Galloway

Here is seen the camp of a small tribe of sheep-owning nomads in northern Africa. They live very much as their ancestors did thousands of years ago.

"So should I," said Jane. "Will you tell us about that, Mother?" So Mother told the story of Guti (gōō'tè), the little goatherd.

"Guti lived many thousands of years after Bo-Bo, whom Father told us about last night," began Mother. "Life for Guti was safer and pleasanter than it had been for Bo-Bo. Guti was not only a member of a family; he was also a member of a tribe. The tribe was made up of a number of families. Guti's own mother and father and brothers and sisters were in it. His aunts and uncles and cousins and some other people were also members of the tribe.

"One starlit night Guti and his father were tending the goats belonging to the tribe. They had built a great ring of fires around the pasture in order to frighten away bears and wolves. From time to time they put more wood on the fires. When all the fires were burning brightly Guti and his father sat down beside one and began to talk. In the tents below them, the other members of the tribe were sleeping.

"Guti's father looked up at the stars. 'Do you see that bright star just above the top of the mountain?' he asked Guti.

"'Yes, Father,' Guti replied.

"'When that star has fallen behind the mountain and we no longer see it in the sky, then is the time for us to plant the grain.'

“‘Father,’ asked Guti, ‘was there ever a time when there were no goats to tend, and no grain to plant?’

“‘Oh, surely not!’ exclaimed Guti’s father, as if such a thing were impossible.

“Guti’s father was wrong, of course. Bo-Bo’s family, as we know, had not owned sheep and goats and did not raise grain. Guti’s tribe had come together so many years before Guti was born that no one then living could remember how it began. We believe it came together in some such way as this:

“In the very early days men lived by hunting. They often had to move about from place to place, following the animals which they hunted. Sometimes a forest fire would sweep over a large part of the country, killing or driving away all the animals. Or all the streams would dry up and there would be no water to drink. Then the people had to move to another place where they could find water and animals. It was much safer for several families to move together. Families of relatives wanted to stay together.

“By living and working together and exchanging ideas, people slowly learned certain things which made life easier for them. They learned how to tame sheep and goats, and, much later, how to raise wheat and barley and other grains. They learned that some men of the tribe were the best fighters, while others were the best hunters. One man could make

sharper and more polished spears than the others, so he was given the task of making all the spears for the tribe. Another made the bows and arrows.

“However, life was still dangerous. People feared the wild animals. Even more, perhaps, they feared unfriendly tribes. Sometimes an unfriendly tribe would come down out of the mountains and steal their herds.

“At night when Guti and his father watched the goats, they kept a sharp lookout for bears and wolves and unfriendly tribes. Late that night Guti’s father thought he saw men moving from tree to tree or from a tree to a rock. When he was sure there were enemies about, he whispered, ‘Guti, crawl on your stomach down to the tents and awaken the chief and



The pictures here show some of the ways of living of a wandering desert tribe. They are cooking a meal, traveling in a caravan, filling a goatskin bag with water, mending a spear, and attacking an enemy.

the warriors. We are going to be attacked. You are so small, the enemy will not see you.'

"Guti was frightened, but he was a brave boy. He crept on his stomach until he had almost reached the tents. Then he got up and ran as fast as he could.

"The enemy has come! We are going to be attacked!" he whispered as he wakened the sleeping tribesmen.

"The warriors got out their spears and bows and arrows, and crept out to meet the enemy tribe. When Guti's father saw the warriors coming, he began to drive the herd of goats down toward the tents.

"Suddenly the enemy attacked. With wild cries they rushed at the warriors of Guti's tribe. The warriors fought back well. It was a hard, short battle.

"When the battle was over and Guti's tribe had won, no one wanted to go back to sleep. The women began to prepare a feast, and the warriors danced to celebrate their victory. Everyone was very happy because the enemy had been driven away.

"Guti was called a hero. He had warned the tribe of the coming of the enemy. He was allowed to pick a goat from the flock for his very own pet."

* * * *

"Guti had a much better time than Bo-Bo, didn't he?" said Peter. "He had more to eat, he didn't have to live in a dark, cold cave, and he had more people to talk to and play with."

“The thing that made Guti’s life most different from Bo-Bo’s,” said Father, “was that people had learned to live together in larger groups. Each family no longer had to depend on itself for everything. All the members of a tribe worked together. Working together for the good of all is ‘teamwork’ such as you have in your games. We call it *co-operation*. When people learn to co-operate, their lives become easier and pleasanter.”

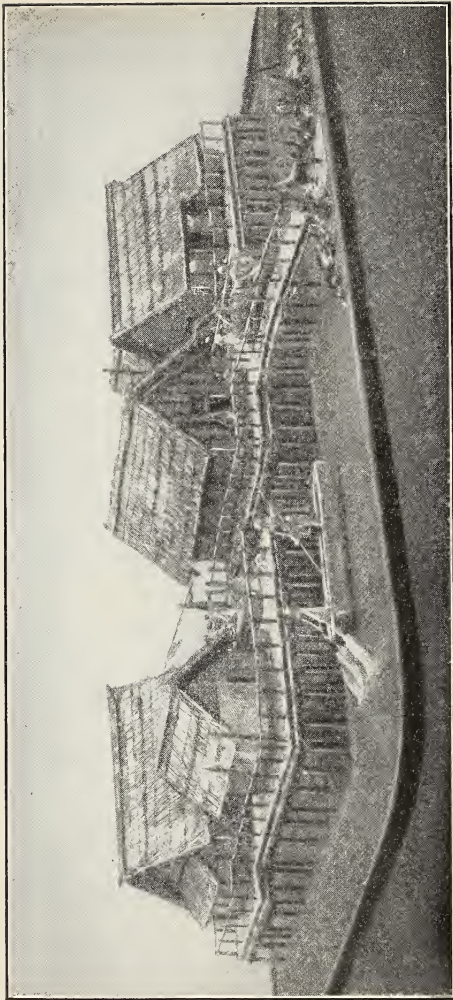
Co-operation

Head the list of words in this Unit with the word *co-operate*. Write opposite it both the dictionary meaning and the meaning which your class make up for it after reading “Guti, the Goatherd.”

Co-operate with the other members of the class in making pictures illustrating the story of Guti, the Goatherd. Divide your class into three groups. Decide which group will draw

1. Guti and his father watching for the enemy.
2. Guti warning the members of his tribe.
3. The battle of the tribes.

Make a list of the ways in which you co-operate with others (1) at home, (2) at school, and (3) on the playground.



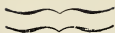
American Museum of Natural History

RESTORATION OF LAKE DWELLERS' HOUSES

This shows how people today think the homes of the Lake Dwellers looked long, long ago. How many families do you think might have lived in the houses shown here? Notice that they stand on a platform resting on posts driven into the bottom of the lake. What are the houses made of?

In what ways would people have to co-operate to build such houses?

Do you think your class can co-operate in making a model of a Swiss Lake Village like this? If so, you will find suggestions for it on page 183.



The People Who Lived Over a Lake

One evening, a few days later, Jane and Peter's father was away. After dinner, Mother washed the dishes. Jane dried them and handed them to Peter, who put the dishes away.

"This is what you call co-operation, isn't it, Mother?" asked Peter.

"Yes," Mother replied. "Tonight I am going to tell you about some people who had learned to co-operate even better than the members of Guti's tribe. These people lived over a lake."

"Over a lake!" exclaimed Peter. "How could they?"

"They built their homes on a platform over the water. The people are called the Lake Dwellers."

"But how did they build their homes over the water?"

"That is what I am going to tell you," answered Mother. "It was a big task and many people had to work at it. Now that we have finished with the dishes, shall we go into the living room?"

"Some years ago," said Mother, "the water of the Lake of Zurich (zoör'ík) in Switzerland sank very low because there was so little rain. People noticed

a great many posts showing above the water. No one knew what the posts were for or who put them there. But some men who wanted to learn about early ways of living went to the lake. They dug in the mud around the posts to see what they could find. To their surprise, they found bones of animals and people, tools of stone and bronze, boats, pottery, and even bits of cloth, all buried at the bottom of the lake.

"Later, in other lakes of Switzerland, and in some other lands, they found more posts. They figured out that the posts were really logs that had been pounded into the lake bottom. Early people had built platforms on the posts and had built their homes on the platforms. In one lake there were enough posts to hold up a platform on which more than a thousand people could live. These early Lake Dwellers, as they are called, were safer from beasts and enemies when they lived in the lake village.

"We think that the first lake villages were built about ten thousand years ago, when people were still using stone tools. Can you think how the people were able to build such villages over the water? They could co-operate with one another, but they had no machines to help them."

"First, they had to cut down trees for the posts," said Peter.

"Yes," said Mother. "They needed thousands of posts to hold up a village. They had to do a great deal of chopping and hard work."

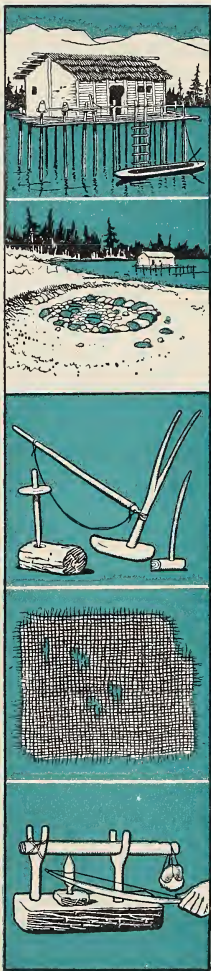
"Perhaps the women and children helped to drag the logs down to the lake," said Jane. "Then some of the men pounded the logs into the lake bottom."

"First of all the logs had to be sharpened so they would sink into the mud more easily," said Mother. "Some of them were sharpened by fire. Others were chopped to a point by stone hatchets. All the posts had to be taken out into the lake on small boats or rafts and driven into the lake bottom. Then the tops of the posts were made even. Thick, rough boards split from logs were laid on top of the posts to make a large platform. On this platform the houses were built.

"The walls of the houses were made of poles and branches woven together and plastered with clay. The roofs were covered with straw and reeds. Each house had a stone hearth where a fire was kept burning. Many, many people had to co-operate to build such houses as the Lake Dwellers had."

"But why did they build their homes over the lake? It wouldn't have been nearly so much work to build them on land," said Jane.

"They built them over the lake for safety," answered Mother. "We think that the Swiss Lake Dwellers



were peaceful farmers. They raised grain and had herds of sheep, goats, and cows. But warlike tribes and wild animals sometimes attacked the herds and villages. The people were much safer if they lived over the lake, where the village would be hard to reach.

Of course, the Lake Dwellers had to have an easy way to get to land, so they built bridges from the platforms to the shore. Over these bridges they drove their cattle to pasture each morning and brought them back to the village each night. During the day people worked in the fields on shore. But in the evening, when all the cattle and people were in the village, the bridges were drawn up so that they could not be used.

The pictures here show a small Lake Dwellers' house; a place where they built big fires on the shore; and some of the things they made and used. The third picture shows an ax, a plow, and a drill for starting a fire; the fourth, a piece of woven cloth; and the fifth, a drill for boring a hole in a stick to be used as a handle.

"You can see how safe the Lake Dwellers were when they had drawn up their bridges for the night. The bears and wolves could not get their cattle. The unfriendly tribes could not reach the village unless they came in boats.

"The Lake Dwellers not only co-operated in building their villages, but they also co-operated in their other work. Even the children were very busy. Perhaps they drove the cattle over the bridge to pasture and drove them back at night. People had to plant grain, tend it, reap it, and store it for the winter. Food for the cattle also had to be stored. Workmen had to make tools, clothes, and nets for fishing. There was work for everyone."

"Didn't the Lake Dwellers have any time for play?" asked Jane.

"At night when the work was done they may have sung songs and told stories. They had the music of drums and bone whistles. Perhaps, while some sang and told stories, others made pottery or tools of wood and bone."

Just then Father came into the room. "Well," he said, rubbing his hands before the fire, "what has Mother been telling you about?"

"About the Swiss Lake Dwellers," said Peter and Jane, together.

"What did you learn about them?"

"We learned that they built their homes over a lake, where they were safe from wild animals and enemies," said Jane.

"And that they knew how to co-operate or they wouldn't have been able to build their villages," added Peter.

"They lived in a village where they did not have to worry all the time about wild animals and enemies," said Mother. "They had plenty of water and could raise their crops and store them up for the winter. Because they did not have to worry so much about getting food and clothing and shelter and protection, they had more time to think. When people began to live in groups, talked often to one another, and co-operated, better ways of living really started. We call this better way of living *civilization*."

Using the Map

Find on the map of the world the place where the Swiss Lake Dwellers lived.

Explaining

Tell in your own words what this statement in the story means to you:

"We call this better way of living *civilization*."

Civilization is a very important word. Be able to tell what it means and to use it in sentences.

Making a Lake Village

Co-operate with your classmates as the Swiss lake village people did with each other by constructing a lake village on the floor of your classroom.

If there is not room on the floor, can you build the village on the playground?

Do your activity like this:

1. Decide why you wish to build such a village and what you wish your activity to show.

2. Make a list of materials which you will use, such as (1) paste, (2) laths for platforms, (3) glass or blue paper to resemble a lake, (4) straw for weaving the walls and thatching the roofs, (5) clay to plaster the walls, and (6) things which the class members offer to bring to look like the things which the Swiss Lake Dwellers used.

3. Appoint committees who will take care of each part of the activity.



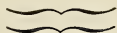
Ewing Galloway

This is part of a wall painting in the American Museum of Natural History in New York City. It shows primitive men painting pictures of the mammoth on the wall of a cave.



Armstrong Roberts

What comforts does this family have? How do you suppose its members co-operate?



Living and Working Together

Bo-Bo lived in a cave. Guti lived in a tent. The Lake Dwellers lived in houses.

Bo-Bo's family lived by itself. In Guti's time several families lived together. In the Swiss lake villages, many people lived together and co-operated.

Living and working together in groups is good. It is easier for groups to protect themselves from enemies. In groups people have other people to talk to, to work with, and to play with. In groups people share the work, and are able to have more comforts.

Group life is necessary to good ways of living.

Making a Play

Divide your class into two groups. Have one group make up a play showing how primitive people co-operated. Have the other group make up a play showing how children co-operate in a game at school today.

A Testing Game

Read statements numbered 1 to 7 on page 186. Some are true and some are false. Talk about each statement in class, and decide whether it is true or

false. Decide on a good true statement to take the place of each one that is false.

Is It True that

1. A family is a group?
2. A tribe is smaller than a family?
3. A group is a number of people who quarrel among themselves?
4. Dividing up work so that some hunt, some fight, and some farm is called teamwork or co-operation?
5. Life was not so easy or pleasant when many families came to live together in tribes?
6. When people have more time to think they do not have such good ways of living?
7. Co-operation is the same as teamwork?

Reading and Talking Time

Here are some books and pages where you can find stories of early groups and of some of the homes men lived in. You may want to tell one of the stories to the class.

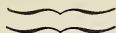
Carpenter, Frank G., and Carpenter, Frances, *The Houses We Live In*.

Knowlton and Gerson, *Our Beginnings in the Past*, pages 86-89, 106-113.

Lansing, Marion F., *Man's Long Climb*, pages 71-74.

Petersham, Maud, and Petersham, Miska, *The Story Book of Houses*.

Wells, Margaret E., *How the Present Came from the Past*, Book I, pages 70-79, 102-123.



The Family Group

"What story shall we have tonight?" asked Father as he and Mother and Peter and Jane settled down once more before the cheery fire. Out of doors the wind was whistling through the trees. The cozy living room seemed more comfortable than ever.

"We have seen how group life began and how living in groups can make life pleasant and safe," said Mother. "Tonight we might talk about some of the groups we belong to. We can see how they help to make our ways of living."

Peter began to count, on the fingers of his hand, the groups to which he belonged. "I belong to a family, to a school group—," he said.

"And we live in a town and a country," added Jane.

"We belong to the world, too," put in Peter.

"Well," laughed Father, "I doubt very much that we can find time this evening to talk of all the groups you have already mentioned."

"We might start with the first group we know anything about," suggested Mother.

"You mean the family, don't you, Mother?" asked Jane.



C. M. Parker

MOTHER AND CHILD—a family group of lions.

"Yes," nodded Mother. "When you were born into our family you were helpless little babies. You had to depend on Father and me for everything you needed in order to grow."

"Oh, yes," exclaimed Jane. "I remember when Cousin John was very little. About all he could do was to cry and eat and move his arms and legs."

"Now he is two years old. Think how many things he has learned to do," said Peter. "He can walk and even help feed himself. He has learned many words which he heard older people use."

Mother smiled and said, "Your father and I spent many, many hours teaching you twins how to feed yourselves. We taught you how to keep yourselves clean, and how to dress yourselves. You can see that the family first shows children how to do things for themselves."

Peter had an idea. "Do you remember, Jane, that Fluff showed her kittens how to catch mice? Remember what fun we had watching Jerry teach her pups how to play and dig in the ground?"

"Oh, yes," said Jane. "Remember, too, how the robins in the apple orchard tried to teach the little robins how to fly? The older birds almost pushed the little birds out of the nest."

"Among many animals there is a kind of family life," said Father. "However, almost all animals

grow up very fast and learn quickly their simple ways of living. Boys and girls take almost twenty years to grow up. The family group is much more important for people than it is for cats or dogs or birds or lions or tigers.

"Our family teaches us the language we use," Father continued. "A boy or a girl that is born into a Chinese family learns to speak Chinese. In the United States our families teach us to speak English."

"It is in our family that we first learn ideas of right and wrong," said Mother. "And usually we grow up to have the same ideas about religion that our family has."

"We get many of the things we like to do from our families," said Jane. "Mary Smith knows ever so many songs, because her family sings a great deal. In Barbara Fitch's family there is not much singing, and Barbara does not know nearly so much about music as Mary does. Barbara does know lots about stories, though, for every evening her father or her mother reads out loud to all the family."

"Harry Jones's father has a workshop in the basement," said Peter, "and Harry often works with his father. I suppose that is why Harry can make boats and carts and lots of other toys much better than any other boy in our class can."



This family will enjoy a beautiful flower garden because all of its members co-operate.

"We might say, then, Peter, that our families teach us to like and to do certain things," said Father.

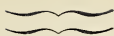
"It is hard to say in words many of the things the family group does to help make our ways of living," said Mother. "In a family that is happy, every member learns to do his share of the work. He learns to be careful of his own things and other people's things. He learns to be neat and tidy and to do whatever he can to make family life pleasant. Living with father, mother, sisters, and brothers in a family shows us how important it is to co-operate. In our family we first learn to work together in a group."

Writing a Summary

Write a summary about the things we learn in the family group. You will want to write a summary about each of the next four stories, too.

Family Co-operation

Make a list of the things a boy or girl may do to co-operate with the family. Put the list in your notebook and talk the list over with your mother and father or other people with whom you live.



The School Group



Ewing Galloway

PLEASANT WORK AT SCHOOL. The boys and girls shown here are making a model of an oasis in the Sahara.

Miss Tyler's schoolroom was a cheerful place. Peter and Jane liked to go to school there. It was always fun to meet their playmates. They liked to work and play with other boys and girls.

Miss Tyler looked around the pleasant room. Through the windows she could see the clean fresh snow on the trees and bushes and ground outside. In the sunny windows she saw the plants that the boys and girls helped take care of. On the walls she

saw pictures and maps made by the boys and girls. On the shelves and tables in the room she saw the books everyone liked to read. And in front of her were the rosy-cheeked pupils of her class.

"You boys and girls look happy," Miss Tyler said. "What interesting things have you been doing?"

Everyone had something to tell. Teddy told how he was learning to ski. Emily told of rides in her grandfather's old sleigh. Philip and John had much to tell of the arrowheads and totem poles that they had seen at the museum. Some of the boys and girls spoke of new books they were reading, and others told of things they were making.

"Jane and I like the stories Father and Mother are telling us," said Peter. "They have been telling us how people learned to live in groups and how living in groups helps to make our ways of living." Then Peter told the class about Bo-Bo and Guti and the Lake Dwellers and the kinds of groups they lived in.

Jane said, "Last evening we were talking about the groups that we belong to today and how they help to make our ways of living. We talked mostly about the family." When Jane had told how the family group helps to make our ways of living, she said, "Sometime we are going to talk about how the school group helps to make our ways of living, too."

At once everyone in Miss Tyler's class began to think about the way the school helps to make our ways of living. "It is in school that we learn to read and write and add and subtract," said Edna.

"It took men, living in groups, thousands of years to learn how to speak a language," said Miss Tyler. "It took them thousands of years longer to invent a way of writing. In a few years you learn things that it took early men thousands of years to learn.

"But reading, writing, and arithmetic are not the only things we learn in school," said Miss Tyler. "Can you think of some other important things you learn here in your school group?"

Everyone thought for a while and then Barbara said, "Our school group is much larger than our family group. We meet more people here in school than we do at home."

"How does meeting more people help to make your ways of living?" asked Miss Tyler.

"We get new ideas from working and playing and talking with many different people," said Barbara.

"Yes," Philip agreed. "The things Teddy told us about skiing gave me some ideas I'm going to try out this afternoon."

Miss Tyler nodded, and said, "Yes, in our school group we get much new information. We exchange many ideas. Our school group teaches us some things

that Indian boys and girls had to find out for themselves. There are other things the school group does, that help to make our ways of living. Because the school group is so large, we have to follow rules that help to make school pleasant and orderly for us all. We take turns talking in class so that everyone will have a fair chance to tell what he thinks. We hang up our wraps neatly. We keep our books in order. We make sure that the floor and desks are neat. Because we are a large group we must follow the rules. We all co-operate to make our school a good place in which to work and play."

Up to this time Joe had been quiet, but now he said, "It seems to me that the family group and the school group really work together in helping to make our ways of living."

"Tell us what you mean, Joe," said Miss Tyler.

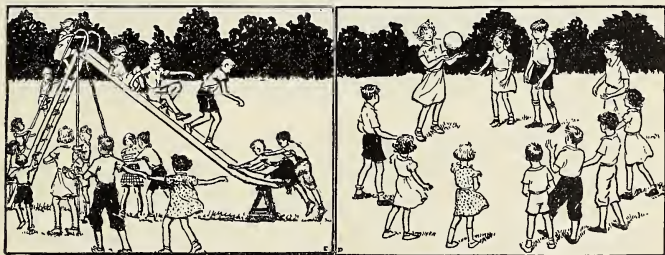
"I mean that both the family group and the school group help us to learn to take care of ourselves," said Joe. "It would be dangerous to go about town if we could not read the signs that warn us of danger. It is in school that we learn to read signs. We learn good health habits both at home and in school. In the family group and in the school group we learn to co-operate by working and playing together."

"You are right, Joe," said Miss Tyler. "We are all glad that we live in the family group and in the

school group. In the family and the school we learn things and get habits that make us good citizens. The family and the school teach us to play and work together. In these groups we learn to co-operate. Both the family and the school help to make our ways of living."

In School

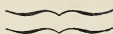
Make a list of the things that you can do in school to co-operate. Put this list in your notebook.



Here are pictures of two groups of pupils on the playground. In one group the pupils do not co-operate. In the other the pupils have learned to co-operate. In which group would you rather be? Why?

Helping the School

Can your class think of any ways in which it could co-operate to raise money to buy more books for your classroom?



The Community Group

"I know you will be glad to hear that all of the money for the new art museum has been raised," said Miss Tyler to her class one morning. The town in which Peter and Jane lived had been gathering art treasures for a long time. It finally had so many that the town's people decided to build a special building for them. Everyone in town was asked to give some money toward the new museum. The school children gave the money they earned by selling old newspapers.

"I knew we could raise enough money," announced Tom proudly.

"But the school children weren't the only ones who helped to raise the money for the museum," said Joe. "The people in the factory where my father works gave some of the money."

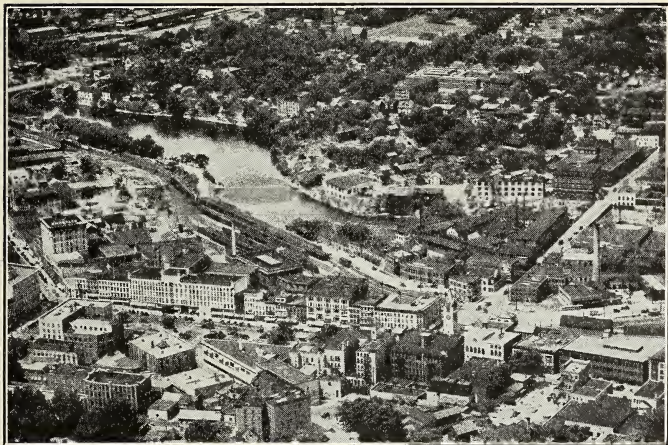
"The storekeepers helped, too," said Fred.

"I didn't mean just the boys and girls at school had raised all the money," said Tom.

"Whom did you mean by 'we'?" asked Miss Tyler.

"The school children and the parents and all of the other people who helped," answered Tom.

"Then you meant the community group," said Miss Tyler. At first, the class did not know what



PART OF A LARGE COMMUNITY THAT GREW UP NEAR FACTORIES

Miss Tyler meant by the community group. After they had talked about it for a little while, however, they learned many things about it.

The class learned that a community group usually grows up around some kind of work. When a factory is built, the people who work in the factory want to live near their work. So they move close to the factory. When a mine is opened, the people who work in it make their homes close to the mine. Sometimes along a river or on the seacoast people begin to use a certain place for a harbor. Soon many people move to the neighborhood of the harbor. Often in the center of a farming district a town will grow up to

provide the farmers with the things they need. The people who live near one another in one place are a community group. There are many, many community groups in the United States. Some of these community groups are very small, others are medium-sized, and others are very large cities.

The class learned, also, that when people come to live together in a community group they do many things to help one another. They hold elections to choose the officials of their community. They, or their officials, make laws which help them to live together. They make traffic laws, health laws, and school laws. They build school buildings, fire stations, health centers, hospitals, and good roads and streets.

Most communities want to make life as pleasant as possible for their people. They build playgrounds, libraries, museums, and community clubhouses.

"A community group is much larger than the family or school group," said Jane, "because the community group is made up of all the people who live and work together in a town."

"I understand now why the new museum is going to be called the Community Museum of Art," said Joe. "It is because the community group worked together to get the money to build it."

"And because it is going to be used by all of the people in our town," said Peter.



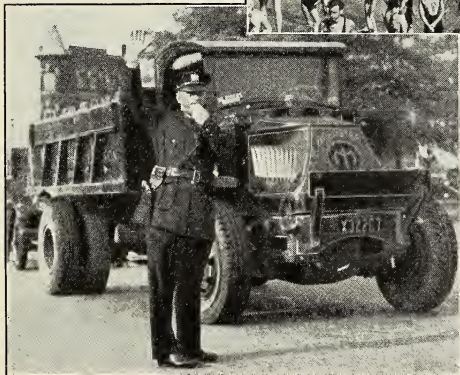
The first picture here shows a room in the public library of a city.

Publishers' Photo Service

At the right you see an artificial lake in a city park, with many bathers in it.



Gendreau



At the left is one of the many city policemen busy in the regulation of traffic.

Ewing Galloway

THREE OF THE MANY THINGS PROVIDED BY THE COMMUNITY GROUP

"I'm sure you know what a community group is now," said Miss Tyler. "We have learned that the family group and the school group help to make our ways of living. Does the community group help to make our ways of living?"

The class had to think for a little while about Miss Tyler's question. Finally, Ted exclaimed, "Surely the community group helps to make our ways of living. It gives us schools so we can be educated."

"It gives us libraries, too, so we can have books to read," said Jane.

"It helps to keep us well by having health officers and public-school nurses and doctors," said Tom.

"The community group helps us to play, because it gives us a community playground and skating rink," said Fred.

Ralph remembered a new law—called an *ordinance*—that had just been made for people riding bicycles, and he said, "When the community group makes laws for us it helps to make our ways of living. The laws are made to help us live together better."

"The community group makes our lives safe by having policemen and firemen to protect us," said Ted.

While the boys and girls were answering Miss Tyler's question, Miss Tyler was writing on the blackboard. The next page shows what she wrote:

HOW THE COMMUNITY GROUP HELPS TO MAKE OUR WAYS OF LIVING

1. It gives people work to do.
 2. It makes some of our laws.
 3. It gives us education.
 4. It helps us to keep healthy.
 5. It helps to make life safer for us.
 6. It helps to make life pleasant for us.
-

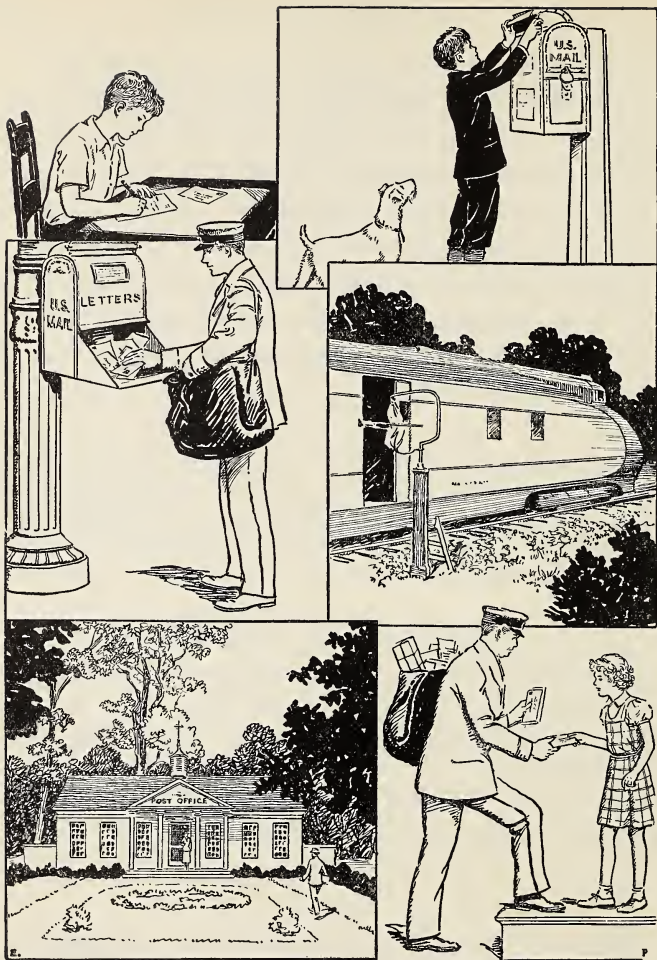
Can you add anything to the list the boys and girls helped Miss Tyler to make? Turn ahead to page 220 to find some books that tell about the community group.

Observing Your Community

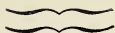
Go for a walk around your neighborhood and make a list of all the buildings you see where work is done which helps to make your ways of living. Opposite the name of the building write the kind of work that is done in it. Be able to tell how each kind of work helps to make your way of living.

A Talk

If you have ever taken part or co-operated in a drive to raise money for any public cause, tell the class about it.



THE MAIL SERVICE. After your letter is written and mailed, it may be collected by a postman, carried by train or airplane to the right city, and finally delivered by another postman.



When the Class Talked about the State and the Nation

"My country, 'tis of thee, sweet land of liberty, of thee I sing. . . ."

As the class finished its morning song, Miss Tyler said, "Do you know you have just been singing about another group to which we all belong? We are all members of the big group of people living in the United States. We are all Americans. The American group is sometimes called our national group. It helps our ways of living in many ways."

"I don't see how the nation helps me very much," spoke up Joe.

"One way the nation helps to make our ways of living is by the post office," said Miss Tyler. "The government owns and runs the post offices and mail service. Think how important newspapers and magazines and letters and parcel-post packages are. The national government carries these through the mails for us, and does it quickly and safely."

Miss Tyler and her class talked of many other ways in which the national government helps to make our ways of living. Here are some of the things the class found out.

The officers of the United States are at work all the time to catch and punish men who break the laws of the nation.

The government builds lighthouses and makes maps of the coast and of ocean currents. Because the government does this work, it is easier for us to get such things as bananas from Central and South America, and pineapples from Hawaii (hä-wī'ē). The government does a great deal to help trade. Trade makes it possible for us to have all the goods and comforts we enjoy.

In Washington, D.C., there is a bronze rod which is exactly a yard long. This is called the "standard measure," and all other yardsticks in the United States have to be made the same length. The laws and the officials of the nation that tell what our weights and measures are, have a great deal to do with our ways of living. Because they tell what a *pound* is, it is easier for us to buy sugar and other things which are sold by weight. It is because we learn from them just how much a *quart* is, that a quart of milk is the same amount in San Francisco and in New York, and everywhere else in the nation.

The nation does much for us by coining money. Each nation in the world has its own kind of money. Our nation has cents, nickels, dimes, quarters, half-dollars, and dollars. In England the people have

pence, shillings, and pounds. In France they have francs, and in Germany they have marks. The national group to which we belong makes the kind of money we have.

The nation protects our health, too. Ships carrying passengers who have dangerous diseases are not allowed to land at our ports.

After hearing all these things, Joe said, "I begin to see how our ways of living are made partly by the nation we live in."

You may think of the nation as a very large family. All the people in it influence one another. In China all the people have some of the same customs. In Russia all the people have other ways of doing many things. In the United States the people have some ways of living which are different from those in other parts of the world.

You see that the nation is a big group. Every member of the group shares certain ways of living with all the other members of the group. The officers of the national government are the leaders of the national group. The government influences us because it represents the whole nation—a group of which we are a part.

"Our country, the United States, is made up of forty-eight different states," said Jane. "What is a state?"



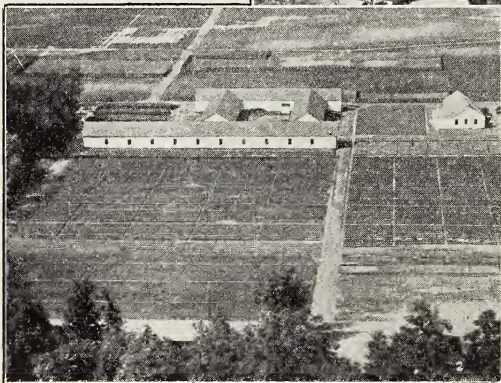
The first picture on this page shows part of the beach in a state park.

Gendreau

The picture at the right shows part of a state highway.



Gendreau



At the left you see a very large nursery for growing trees.

THREE PLACES WHERE A STATE GOVERNMENT IS IN CONTROL

"A state in most parts of the world," answered Miss Tyler, "is a separate nation or country. But here in the United States, each state is only a part of our great united nation. Each state here makes its own laws about many things. The ways of living in families, in schools, and in communities are partly under the control of state laws. The people who live in one state are members of the state group. And all the state groups in the United States join in forming our nation."

Other Ways of Living

Have you read the stories in *Ways of Living in Many Lands*? If you have, write a story telling about things that American boys and girls do which are different from the things that boys and girls in other lands do.

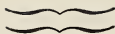
Read a Map

Look at the map of the United States on pages 100-101. Does it tell you how big the country is in which our national group lives?

What is the name of your state? By what other states is it bordered?

Which of the forty-eight states is the largest?

Name two states that are bordered by the Pacific Ocean. Name two states that are bordered by the Atlantic Ocean.



The Largest Group of All

Helen could hardly wait until she got to school. She had a new idea and wanted to tell the rest of the class about it. Just as soon as school started, Helen raised her hand.

"What is it, Helen?" asked Miss Tyler.

"I've thought of another group that we all belong to. It also helps to make our ways of living," she said. "It is the world group."

"How does the world group help to make our ways of living?" asked Joe.

"The people in all the countries of the world help to make our ways of living," said Jane.

"How do people from other countries help to make our ways of living?" insisted Joe.

"We sing songs that come from other countries," said Helen.

"Lots of the music we play was written by musicians of other countries," said Ralph.

"It isn't only music that comes to us from other countries," said Mary, who was interested in Helen's idea. "We get stories, too. I am reading *Alice in Wonderland*, and that was written by a man in England."

"Down in the gymnasium the other day, Miss Harris told us that the game of beanbag came from Japan," said John. "Football comes to us from England. Many other games we play come from other parts of the world."

"We get ideas for cooking from other countries, too," said Jane. "My mother knows how to make Swedish pastry and German cookies."

"We get ideas for clothing from other countries, too," said Edna, thinking about the Japanese kimono she had received for Christmas, and the Scotch plaid dress she was wearing.

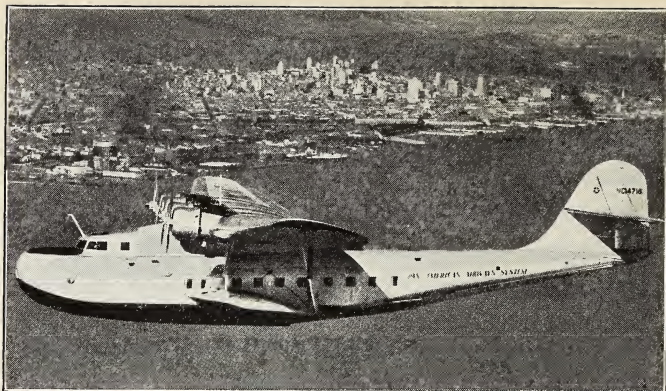
"I don't suppose there is a country in the world that doesn't help us in some way," said Miss Tyler.

"I guess Helen is right," agreed Joe at last. "People from all over the world give us things we use every day."

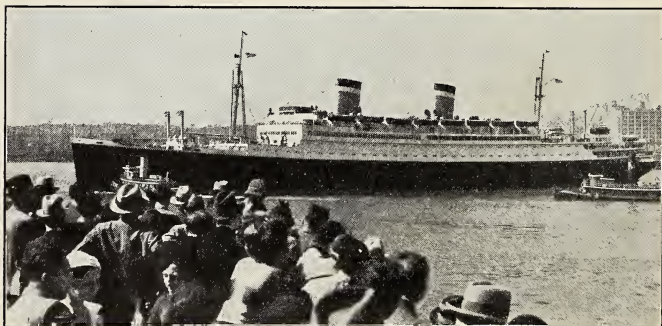
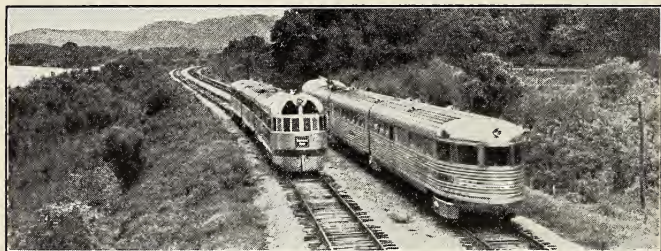
"I read in a book the other day," said Teddy, "that the United States does not produce enough lumber and has to buy some from Canada and from Norway."

"And the very ships that bring the lumber from Norway go back filled with many things made in the United States. The people of Norway use these things in their ways of living," said Miss Tyler.

"Then the United States helps to make some of the ways of living for Norway," said Peter.



Ewing Galloway



© G. A. Douglas, from Gendreau

THREE OF THE WAYS BY WHICH NATIONS ARE CONNECTED

"Yes, indeed," said Miss Tyler. "A great many of our ways of living are carried all over the world."

"Many countries are learning to play our game of baseball," said Teddy.

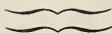
"And they read our stories and see our movies and sing our songs," said Edna.

"And use our machinery," said Peter.

"People all over the world exchange letters and newspapers and magazines," said Miss Tyler. "The countries of the world co-operate by exchanging ideas. Ships sail from port to port carrying goods and mail. The telegraph and telephone and radio bring news from all over the world. Helen discovered the very largest group we belong to, didn't she? First comes the family group, then the school group, the community group, the state, the nation, and then, last of all, the world group."

A Play

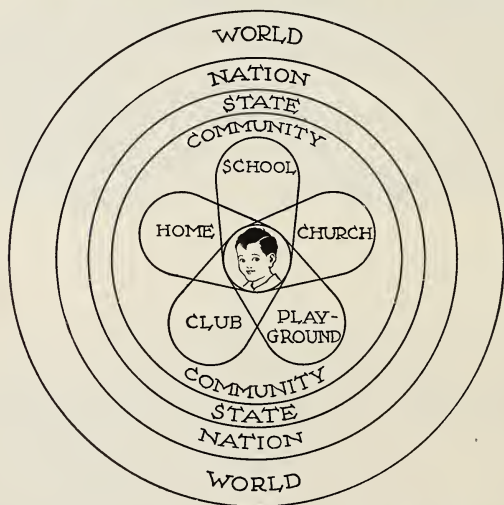
Co-operate with your teacher in preparing a play which you might call "Traders of the World." Let each character in the play take the part of a foreign nation and list the various things he brings to the ways of living of an American boy or girl. Then plan how the American boy or girl shall reply. What things does the United States give to other countries in return?



I Am a Member of Many Groups

One day Jane came to school carrying a large piece of heavy paper rolled up and tied tightly. The boys and girls asked her what was on the paper, but she would not tell anybody. Not even Peter knew what she had.

When the class began talking about the groups to which we all belong, Jane untied the string on the



paper. Then the class saw—as you see here—the kind of picture that Jane had drawn.

"I have been thinking about the many groups to which each of us belongs," said Jane, "and last night my father and I drew this picture. It shows how every person is a member of many groups."

If the boy you see here in the center of Jane's picture could talk he might say:

"I am a member of many groups. First of all, I am a member of my family. I depend on my home for food and shelter and clothing. Many groups help my family get food and shelter and clothing and teach me how to do things for myself. I am a member of our school group. In the school group I learn many interesting things. I learn to play and work with others and to be a good member of my community. I am a member of my church group, of my club group, and of my playground group. All these groups are part of my community.

"I am a *citizen*, or a member of my community. My community is a part of the still larger groups of my state and my nation. All these groups help to make my ways of living. They help me to get my food, my clothing, my shelter, my fun, and my ideas.

"I am also a member of the largest group of all—the world group. I depend on almost all parts of the world for the things I need. The bananas I eat come from Central and South America. My rice may come from China, India, or Japan. The rubber for my

overshoes perhaps came from far-off Africa, or South America, or the islands of the East Indies. Some of the songs I sing came from other countries of the world. I am grateful to the many groups that make life safe and comfortable and happy for me."

Miss Tyler liked Jane's picture so well that she put it on the wall at the front of the classroom. Can you make a chart showing the groups which help to make your ways of living?

Writing a Poem

See if you can put the ideas of Jane's picture into a poem.

Drawing a Picture

Can you draw a picture of the groups to which you belong?

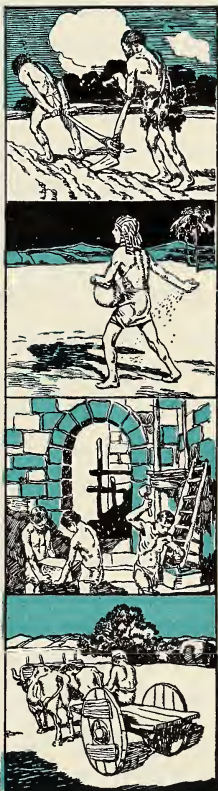
Singing Time

Look in your music book and make a list of the songs given to us by other nations. Ask your teacher if you may sing some of them.

Where Our Ways of Living Come From

Our ways of living come to us partly from the people who lived in the past, partly from the earth we live on, and partly from the groups to which we belong.

1. The people who lived in the past helped us. They learned how to harness fire, how to raise crops, how to exchange ideas with one another, how to make tools, how to build homes, and how to do many other useful and pleasant things. You learned about our gifts from the past in the stories you read about History Hill. Primitive people, the Egyptians, the Greeks, the Romans, the Teutons, and other peoples who have lived in Europe, in America, and in other



The pictures on this page show some of the gifts from people of the past: steps in raising crops; the arch used in house building; and the wheel used in transportation.

parts of the world have influenced our ways of living. History helps to make us what we are.

2. Geography also helps to make our ways of living. We build our homes to suit the climate we live in. The weather influences our games, too. In some places in the winter skiing and skating are favorite sports, but in the summer people go swimming or play baseball and tennis. The foods we eat have to be grown in different parts of the world. The rivers and oceans, the mountains and deserts, the forests, the plains, the seacoasts—all these help to make our ways of living.

3. The groups to which we belong help to make our ways of living. People like to live in groups. The study of group life is called *civics*. Members of community, state, and national groups are called *citizens*. When people live in groups, their lives are safer and more comfortable. People have lived in groups since primitive times. Today each of us belongs to many groups. Each of these groups helps to make our ways of living.

History is the story of the past.

Geography is the story of the earth we live on.

Civics is the story of our living in groups—community, state, and nation.

All these help to make our ways of living, or our civilization.

Organizing a Club

Ask your teacher to help you form a "Good Citizens' Club" in your room. In your meetings you can make rules to help you co-operate with each of the groups to which you belong. You will want to put your rules in your notebook.

Testing Time

Each statement below may be completed with one of these words: family, school, community, nation, or world. On a sheet of paper write the numbers 1, 2, 3, 4, 5, 6, 7, and after each number write the word needed to complete the sentence of that number.

I Am a Member of Many Groups

1. The group in which we learn to read, write, and add is _____.
2. One group that does much to make life safer for us is _____.
3. The group that teaches us most of our ideas of right and wrong is _____.
4. The group that coins the money we use is _____.
5. The group that often grows up around some place in which to work is _____.
6. A group which teaches us how to do things for ourselves is _____.
7. The group which takes care of sending our mail is _____.

Definitions

Decide on the word that completes each of the sentences below:

1. The story of the past which tells of things that have helped to make us what we are is called_____.

2. The story of the earth we live on, and of how the earth helps to make our ways of living, is called _____.

3. The story of living in groups is called _____.

4. A member of a community, state, or national group is called a_____.

Be sure to write these four statements in your notebook.

Reading Time

Here are some books that tell about the groups we live in and what they do for us.

Carpenter, Frances, *Ourselves and Our City*.

George, Carrie Louise, *How the World Is Ruled*.

Hill, Charles T., *Fighting a Fire*.

Hurley, Beatrice D., and Sartorius, Ina, *School Boys of Long Ago*.

Rugg, Harold, and Krueger, Louise, *Communities of Men*.

Talking Time

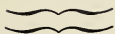
Have you read any stories about groups that you would like to tell your class? Show how the group you are telling about helps to make the ways of living of the people in the group.

UNIT IV



HOW MEN HAVE LEARNED TO FARM





Stories Miss Tyler Gave Her Class

One morning Miss Tyler asked the boys and girls of her class how many of them had been on a farm. Almost everybody in the class raised a hand. Jane and Peter told how they had spent their summers on their uncle's farm.

"What does your uncle grow on his farm?" asked Miss Tyler.

"He grows potatoes, and much corn which is fed to the hogs, and many other crops," said Peter.

"And he has a big orchard in which many apples grow each year!" added Jane.

"Have any of you thought how important the work of farmers is to our way of living?" asked Miss Tyler. "When early spring comes each year farmers all over the country plant and sow the crops which help to furnish our food."

"Farmers furnish us with fruit and vegetables," said Edna.

"And with milk and butter and eggs," said Joe.

Credits: Publishers' Photo Service; Case

The pictures on the opposite page show some kinds of farm work in different parts of the world: irrigating with well water in an African desert, digging potatoes, plowing in Egypt, harvesting rice by hand power in the East Indies, and harvesting beans by machinery in our own country.

“And with meat, too, for they grow hogs and sheep and cattle,” said John.

“Yes, indeed, if no one knew how to farm we’d all be hungry,” said Miss Tyler. “The story of how people have learned to farm is very interesting. I have some stories here about farms and farming which I think you will enjoy reading. The stories tell us about farmers in ancient times, about farming in river valleys, on hillsides, and on great, flat plains. They tell how men have learned more and more about farming.”

Here, on pages 226–302, are the stories the class read! Do you think they will be interesting? As you read, remember to notice what they tell you about the importance of farming in our way of living.

Your Bulletin Board

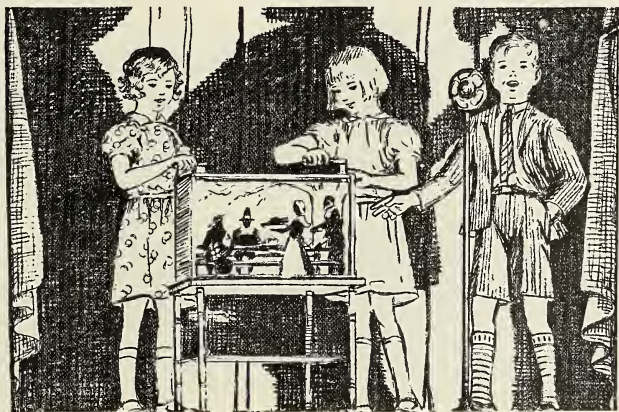
Bring to class pictures about farming that will make your Bulletin Board interesting.

Drawing Time

See how many pictures you can draw as you read the stories of this Unit. Put a picture in your notebook to describe each story.

Making a Movie

Did you ever make a movie? Choose the best pictures that are drawn about each of the stories in this Unit. Then paste them on a strip of wrapping paper or cloth. Be sure that your pictures tell all of the important ideas about farming and are put on in the right order. Roll the strip of pictures on a round stick and put the ends of the stick through holes in the ends of a box. Put a second stick in the box, on which the strip of pictures can be rolled. As the pictures are unrolled from one stick they may be rolled up on the other stick. Take one side off the box so the children can see the pictures as you turn the roll. You can make the open side of the box look like a real stage if you put curtains on it.



The boy is telling about the pictures as they are unrolled.



Joseph, the Camel Boy

Many years ago, there lived in the land of Canaan (kā'năn), east of the Mediterranean Sea, a Hebrew boy whose name was Joseph. Joseph was a good lad, and Jacob, his father, loved him very much. In fact, Jacob loved him more than any of his other sons, and Joseph's brothers were jealous of him.

The country in which Joseph lived was stony and dry. The people had to dig deep wells for their water.



In Palestine today, as in Joseph's time, much of the land is used for pasturing sheep.

In those days, the Hebrews knew very little about farming. They could not raise much grain for food. They had to depend mostly on their sheep for food and clothing.

Joseph's brothers took care of their father's sheep. Often there was no green grass near their father's home. Then the brothers had to drive the sheep a long distance from home in search of grass and water. In some years, a long dry season would come and wither the grass, destroy the crops, and dry up the wells. Joseph's whole family had to move to a new place where they could find food for themselves and their herds. We say that Joseph's people were *nomads*, because they wandered from place to place. As they had to wander so much, they could not build houses for themselves. They had to live in tents which could be carried about with them easily.

Think how differently we live in America today from the way Joseph's people lived so very long ago. Instead of tents, we live in houses. Our farmers grow enough food for themselves and also for those who live in the towns and cities. We do not have to wander from place to place searching for food as Joseph's people did.

One day, when Joseph's brothers were watching their sheep on a hillside a great distance from home, they saw Joseph coming toward them.

“Ha!” cried one brother. “Here comes our brother Joseph. Why should Father always treat him so much better than he treats us? Let us slay him and throw his body into yonder pit!”

“Nay!” cried another. “Here comes a caravan of traders. Perhaps they are on their way to Egypt. Let us sell our brother to them. They may need another slave.”

When the caravan drew near, the brothers sold Joseph to the traders for twenty pieces of silver.

Very often Joseph had seen the caravans on their way to and from Babylonia and Egypt. He had wished he might be a camel boy and go with them. At last, although he hated to become a slave and to leave his home and his beloved father, Joseph was a camel boy on his way to Egypt.

Joseph soon made friends with the other camel boys, but he liked one named Pepy (pěp'ĭ) best of all. Pepy told him that the bundles on the camels' backs were loaded with sweet spices, cloth, silver, and precious stones. When the caravan reached Egypt, these things would be traded for bags of wheat. Pepy told Joseph stories about his home in Egypt. He told about huge pyramids in which kings were buried, and about fields of grain, and many stories of the river Nile. Joseph could tell by the way Pepy said “the river Nile” that he must love the river very much.



A CARAVAN, with loaded camels. What was in the bundles carried by camels to Egypt?



One night, while they were sitting by a campfire, Joseph said, "Pepy, tell me why you love the river Nile so much." Then Pepy told Joseph the story of the river Nile.

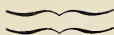
Talking Time

Imagine you are Joseph and tell the class about your life. Use the words *nomads* and *Hebrews* and *caravans* in your story.

Be sure you know the meaning of those words. Do you remember any stories about the farmers of Egypt?

For the Movie Reel

Draw a picture of Joseph's brothers watching their flocks and herds, for the first scene of your movie reel.



The River Nile

Thousands and thousands of years ago in Africa water from the melting snow on the mountains flowed down and made a river. The river cut its way through the stony, hot desert. As years went by, the desert on both sides of the river began to look green. Instead of stones and white sand, palm trees and wild grain began to appear. The river had changed a part of the hot, dry desert into a beautiful green valley in which fruit and grain were growing. The valley was Pepy's homeland, and the river was the Nile.

"One day, a wandering tribe of people came to the beautiful valley of the Nile," said Pepy. "The tribe had always lived like your people, Joseph, by going from place to place in search of water and food. When they saw the beautiful river, the palm trees with their clusters of sweet dates, and the waving grain, they decided not to wander any more. They set up their tents and made the land their home. They began to gather seeds and plant them in the soil, and so they became farmers.

"They had been living, however, on the banks of the Nile only a few weeks when a strange thing happened. One morning Dauuf (dô'űf), a servant of the



Dauuf beside the river Nile. What makes him so unhappy?

chief of the tribe, took his water jar and went to the river for water. Soon, the chief saw him running back again, empty-handed and frightened. When he reached his master's side he cried, 'Oh, Master! The river is leaving us!'

"'What nonsense is this?' asked the chief. 'Come, show me what you mean.' All the people followed the chief and his servant to the river. There they saw the river, flowing along just as it had done the night before. The chief laughed. 'Dauuf, you have been dreaming. The river is still here.'

"'But it is leaving, Master. See this great rock? Last night it was covered with water and today the top of it is dry and hot.'

"'Perhaps you have mistaken this rock for another,' answered the chief. 'But we shall see. Dauuf, put a

mark on the rock just at the spot where the water touches it. If the water line is below your mark tomorrow, I shall believe that the river is leaving us. But if it is not, we shall laugh at Dauuf, the dreaming servant.'

"Dauuf awoke very early the next day and ran to the river. In his heart he wished that he might be wrong and that the river was not leaving. But no! He was right. The water had left his mark high and dry. He called the chief and all the people.

"When the people saw that the river was leaving them, they cried aloud in their sorrow. 'If the river leaves us,' they cried, 'our beautiful green valley will turn into a hot, dry desert. We shall have to wander again in search of water and food.'

"The chief looked very sad, indeed. He knew that what the people said was true. If they wanted to have happy homes and plenty of grain, water, and cattle, they must live near a river. Never had they found in all their wanderings so great a river as the Nile. They must not lose it!

"The chief climbed upon a high rock so that all of his people could see and hear him. 'Pray to the god of the river,' he cried. 'Beg him to keep the river here so that we may live in peace and plenty.'

"The people threw themselves upon their knees and prayed. But their prayers were not answered. Every

day for many days Dauuf marked the river's edge. Always the mark was farther down. But one morning, after he had gone to the river, the people saw him come bounding back with light feet and shining



Dauuf bringing good news to his people.

eyes. "The river is coming back to us!" he cried. You can imagine how happy this news made the people feel. They ran to the river, looked at the stone, and then thanked the god of the river.

"Every year the river acted in the same way. Soon the people learned that it was the habit of the Nile to overflow its banks every summer. The extra water always brought with it fertile soil that it had gathered on the way down the mountainsides. The chief of the tribe commanded Dauuf to watch the falling and the rising of the river. Every morning he had to run through the village, calling out how much the river

had fallen or risen. When Dauuf was too old to do this, someone else took his place. The man who did this was called the 'Crier of the Nile.'

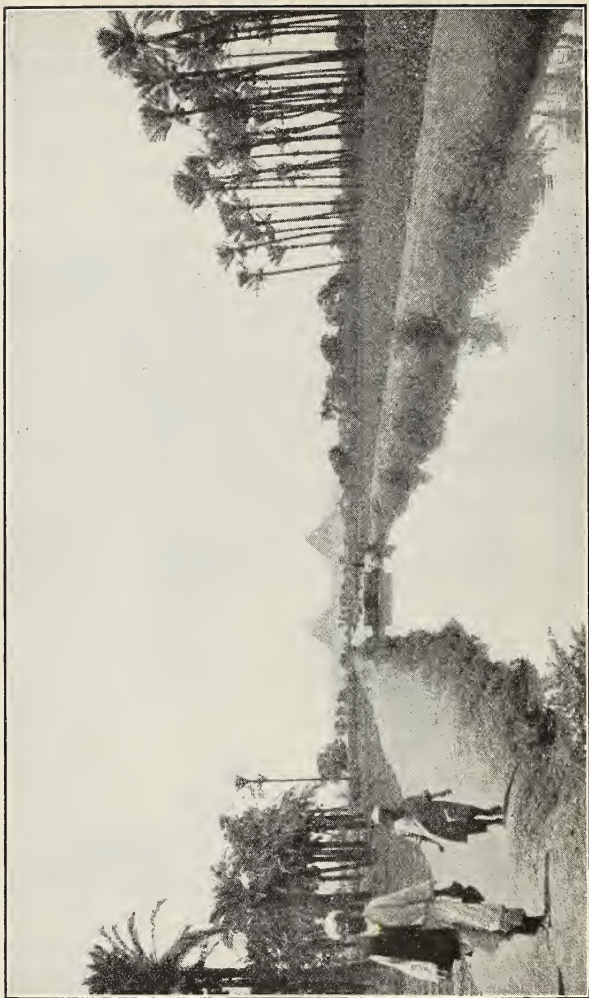
"Other wandering tribes found the river Nile. They, too, stopped wandering and made the Nile Valley their home. They learned that by living in a river valley they could have more and better food to eat. By planting and harvesting their crops year after year they learned many things about farming.

"Why, Joseph," exclaimed Pepy, "your eyes will open wide when you see the valley of the Nile! Your homeland is stony and dry. Your people have to depend upon wells for water. That is why they have to live in tents that can be picked up easily when they must go searching for better grass for their sheep.



One of the smaller clay houses in ancient Egypt.

"But my people live in houses made of clay. Our rulers live in palaces made of stone. My people do



Eating Galloway

PALM TREES AND CULTIVATED FIELDS IN THE NILE VALLEY TODAY

not have to wander in search of food. They have large farms and gardens. That is why my people and I love the river Nile.”

Things to Do

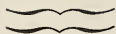
1. Draw a picture of the Nile Valley for your movie.
2. Tell what you have read, before this, about a chief of desert tribes.
3. Give a play. Don't you think this story would make a thrilling play? Be sure to choose good actors for the chief and for the Crier of the Nile. Plan your scenes and write your conversation carefully.

Explaining Things

The land of Egypt is often called the “Gift of the Nile.” Can you tell why?

Tell in your own words how the story proves that this is true: Water and fertile soil are necessary for farming.

When the tribes stopped wandering from place to place, they became prosperous. Can you tell why?



Joseph, a Farmer in Egypt

At last the long caravan trip was over and Joseph was in Egypt. He found that all the things Pepy had told him were true. It seemed to Joseph that the river Nile must contain magic power to make such a wonderful country. There were green fields and rich orchards, making the land very beautiful.

The day after the caravan arrived, Joseph was sold to Potiphar (pŏt'ĩ-fâr), an officer of Pharaoh (fâr'ŏ), the king. Potiphar lived in a beautiful palace and owned very large farms. Every day Joseph had to go to the fields to work with the other servants. He had never seen people farm before, and he enjoyed his work very much. Farming and raising cattle were the most important work of the country.



Plowing, sowing, and reaping grain in ancient Egypt. What do these pictures tell you about the Egyptians' tools and clothing?

Joseph had been a good camel boy. Now he tried to please Potiphar by being a good farmer.

Sometimes Joseph had to help the men who were planting grain. The plow used by the Egyptians was not like ours. The plow was made of wood and was pulled by oxen. Two men were needed for plowing. One kept the plow pushed well into the ground, and the other drove the oxen. When the seeds were sown, they had to be trampled into the mud. A flock of sheep were driven around and around in the field until their feet had stamped all the seeds into the ground.

When harvest time came, Joseph helped to cut the grain with a sickle, or curved knife. After the grain was cut he liked to help with the threshing. A stack of grain was put into the center of the threshing floor. Then some donkeys were driven back and forth over the grain to stamp the kernels off the stalks and out of the chaff. When the donkeys had stamped enough, they were led away, the stalks of straw were taken off, and the grain was swept into a heap. After that, women threw the grain up into the air. The heavy grain fell quickly to the earth, and the wind blew away the chaff and dirt. Then the grain was gathered up and carried to the granary, or storehouse, where it was kept.

Joseph learned how very much the Egyptians liked animals, especially cows and oxen. Besides the cattle,

there were a great many sheep, goats, and donkeys. Joseph had never before seen anything like the orchards of the Egyptians, which grew several different kinds of fruit.

Often Joseph wished he might show his father the wonderful land of Egypt and share with him some of the many good things which he had to eat. He wished, too, that his people could have a river like the Nile. Then they could learn to be farmers, too, and raise plenty of good food. They would not have to wander from place to place in search of food and water, but could live in houses on farms, as the Egyptians did.

Potiphar soon learned that Joseph was a good workman and could be trusted. When Joseph was old enough, he was put in charge of all of Potiphar's servants and farms. Joseph managed so well that Potiphar grew very rich. His storehouses were always full of grain and fruit. When Pharaoh, the king, heard how wise Joseph was, he put Joseph in charge of the whole land of Egypt. So Joseph, who had come there as a camel boy, became the governor of the land of Egypt.

While Joseph was governor he taught the people of Egypt how to be thrifty. He sent out messengers to all the farmers. "Tell them," he said, "that while our harvests are good we must save some of the grain.

Then if the harvest is poor any year we shall still have something to eat. Tell them to send Pharaoh one fifth part of their grain every year. He will build granaries in which to store it. Then the people of Egypt will always have plenty to eat."

The time came when the people of Egypt were glad that Joseph had taught them to save their grain. For several years the crops were poor in Egypt and very poor in all the neighboring lands. There was a great famine. Many people had to go hungry because they had no grain. Their cattle died because there was no green grass and no water for them. But in the land of Egypt the granaries were nearly full and the people had enough to eat.

When some tribes heard about the granaries of Egypt, they sent messengers to Egypt to buy grain. One day, among the people who had come to buy grain, Joseph saw his own brothers. He was so happy to see them that he forgave them for being unkind to him. They were surprised to find the brother whom they had sold as a slave now the governor of Egypt.

When the king heard that Joseph's brothers had come to buy grain, he sent a messenger to Joseph, saying, "Send your brothers home for your father and their families. Tell them that Pharaoh invites them to make their home with you."

At last Joseph's wish was fulfilled. His father and his brothers could live with him in Egypt, the land of plenty in the valley of the Nile.

Sand-Table Scene

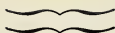
On the sand table make a model of the Nile Valley. Your teacher will show you how to make some palm trees and perhaps to use real water for the river.

Drawing Time

Draw the scenes about Joseph in this story. Show him farming in one scene. Show how the Egyptians harvested wheat in another scene. Show the meeting of Joseph and his brothers in Egypt.

Making a Plow

For those of you who like to build: While part of your class are making the sand table, you may construct a plow like the one Joseph used.



Things to Know about Farming

Long ago there were no cities, no houses, no stores, no streets. There were dark forests and wide plains everywhere. People lived in caves or tents or huts. They trapped and killed animals, dug roots, picked berries, and searched for nuts for food.

Primitive people wandered from place to place to get enough food. They knew nothing about farming.

All of us today owe a great debt to the people who first learned how to farm. If we only knew who the first farmer was, we should erect a monument to his memory and hold a great festival in his honor. The unknown person who first gathered seeds and planted them and then harvested his crop has done more for us than the greatest soldier who ever lived. Learning how to farm is an early and very, very important step in the beginning of the civilization, or way of living, we enjoy today.

Two ideas about farming we should know, are:

1. *Primitive people did not know how to farm. They were not civilized.*

2. *Farming is very important to civilization. If people had never learned to farm, we could not live as comfortably as we do now.*



HOME WORK OF A PRIMITIVE FAMILY who were not farmers.

Picture Study

In the picture on the opposite page, what kind of clothes do the people wear? What other things show that they are not farmers?

For Your Notebook and Your Movie Reel

You will want to copy the two ideas about farming (at end of page 243) for your notebook. Label them "Ideas about Farming." Illustrate them if possible with pictures for your movie reel.

Reading Time

These books tell stories about the beginnings of farming. Ask the librarian to help you find them.

Burns, Annie J., *Stories of Shepherd Life*.

Dopp, Katherine E., *The Early Farmers*.

Dopp, Katherine E., *The Early Herdsmen*.

Dutton, Maude B., *In Field and Pasture*.

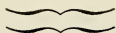
Here are some stories already selected for you which you may like to read.

On pages 75-84 in Knowlton and Gerson's *Our Beginnings in the Past* and in Lansing's *Man's Long Climb* on pages 3-21 you can find interesting stories of how men learned to plant seeds and till the soil.

On pages 32-57 of *In Field and Pasture* Maude Dutton tells a story of farming in the Nile Valley. In the same book you can find stories of how other people farm in different parts of the world.



PLOWING TIME IN ANCIENT GREECE. What kind of soil and what kind of tools did the Greeks have?



Farming in Ancient Greece —

Damon (dā'mŏn) was calling, "Geta! (gē'tā) Geta!"

Damon lived in ancient Greece more than two thousand years ago. During the winter he lived in Athens, but in the summer he lived on his father's farm. Just now he had returned to the farm, and was calling his pet goat. The goat, Geta, wished that she could tell Damon how happy she was to see him again.

Damon and Geta started out to make a trip over the farm. Damon talked and talked to Geta, as if to make up for the long time they had been away from each other. "Are the bees storing honey on the high hill beyond the olive orchard?" he asked. Geta could not answer the question, so the boy and the goat went up the high, rocky hill. Damon grew warm and short of breath as they climbed and climbed.

"I wish I could climb steep hills as easily as you can!" said Damon. "It is no wonder Father keeps goats on the farm. They are such good climbers. You must be able to eat the grass on the hilltops that the cows cannot reach."

When Damon and Geta reached the top of the hill, they found that the beehives were there again that

summer. Damon and Geta climbed and played among the rocks a long time. At last Damon sat down to rest. Geta was not at all tired and wanted to play longer. She stayed close to Damon, though, and listened to the things the boy told her.

"You know, Geta," began Damon, "this summer I am going to keep my eyes open and learn all I can about farming in Greece. On the way up here from Athens, Father told me that farming in Greece is much harder than it is in Egypt. In Egypt the Nile River makes the land very fertile. Much of our soil is not fertile, because Greece is a hilly, rocky country."

Damon went on thinking out loud and talking to Geta. "I see some things that Father's slaves do to make things grow on this hilly farm," he said. "They turn out the sheep and goats to eat, or graze, high up on the hillsides. They make use of some of the hillsides by planting grapevines on them. And see! Farther down on the hill is an olive orchard. I heard Father talking about the olive orchard a few days ago. He said that he would rather lose all the rest of the farm than lose the olive orchard. It is the most valuable part of a Greek farm.

"Let's see," said Damon. "There are four ways in which the hillsides are used. They are used for beehives, for grazing, for vineyards, and for olive orchards. And look, Geta! I never thought before why



R. I. Nesmith and Associates

A GROVE OF OLIVE TREES IN MODERN GREECE

wide level steps have been cut on some of the hill-sides. We call these wide steps *terraces*. Terraces help to keep the soil from washing down into the river when the heavy rains come."

Damon could see that Geta was tired of standing still, so he said, "I think we know now how Father raises food on the hilly parts of the farm. Let's walk down to the level part of the farm and see what grows there."

Damon and Geta scrambled down the steep hill and were soon beside the wheat field. Damon had often wondered why there were so many ditches on the farm. Today, as he watched the water being run

into the ditches and spread over the field, he understood the reason for the ditches. "You know," he said to Geta, "Greece has very little rain during the summer months when water is most needed for our crops. That is why Father has had all these ditches dug here to bring water from the river to all parts of the field. He calls this way of watering the fields *irrigation*."

"The Egyptians knew how to irrigate their fields of wheat long ago, and Greek travelers learned it from them. You know, Geta, bread is the most important food we have, and so we raise as much wheat as we can on our farm. Father says that bread and olive oil make a good meal for anyone."

Damon and Geta next went to see the reaping and threshing. Oxen and mules walked over the grain to separate the kernels of wheat from the chaff. After the wheat had been cleaned, slaves stored it in large jars. Damon explained to Geta that some of the jars of wheat would be kept for the people on the farm. The other jars of wheat would be taken to Athens and sold at the market place.

Damon was becoming very hungry. As he and Geta walked toward the house, he told Geta that two products from Greek farms were carried to many countries in the world. "Geta, can you guess what these two products are?" he asked. Geta only looked

at Damon. "I shall tell you, then. They are olive oil and honey."

Geta may not have understood much about Greek farming. On that day, however, Damon learned:

1. Why Greek farming was hard.
 2. What products were raised on the hillsides and in the level fields.
 3. What products were sent to other countries.
-

New Words

Add these new words to your word list.
Look up their meanings in the dictionary.

terrace irrigation

Testing Game

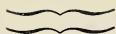
Copy these four sentences in your notebook. Add words to make them tell four ideas that you have learned about farming in this Unit:

1. Greece was hard to farm because it was a....
2. The products raised on the hillsides were....
3. The Greeks made some of their hillsides into terraces to....
4. The products they sent to other countries were....



Gramstorff Bros.

THE SOWER—a famous painting made by the French artist Millet.
What does it show about farming in the time of the knights?



Farming in the Time of the Knights

Joseph lived in the Nile Valley almost four thousand years ago. Damon spent his summers on his father's hilly farm in Greece over two thousand years ago. About seven hundred years ago, one morning in Frankland, a man called out, "Pierre! (pyâr) Pierre! It is time to get up!"

Sleepy Pierre awoke, stiff and cold from his night's sleep on the dirt floor of his hut, and soon got up. Daylight was just beginning to show itself that spring morning in the year 1235 when Pierre's mother gave him and his father their breakfast of black bread and water.

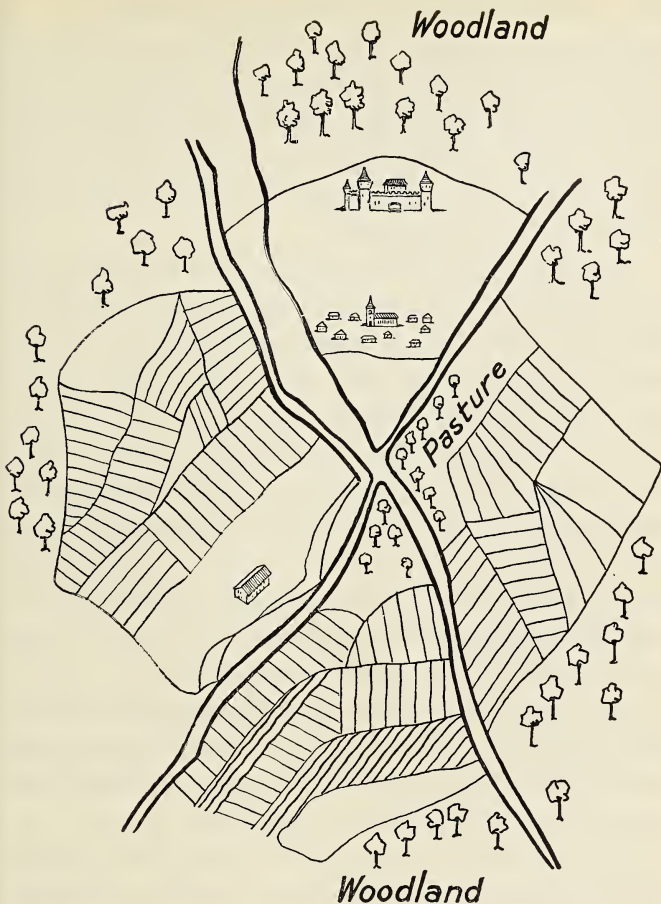
"When the sun appears on the horizon, I hope that we shall be at our strips of land in the field beyond the meadow," said his father, as the two were eating their little breakfast.

Pierre and his family were among the people who lived in one of the villages of the land now called France. They lived during the Middle Ages, as the years between 500 and 1500 are called. Pierre's family lived about fourteen hundred years after the time of Damon. His family worked on a *manor*, as the very large farms of the Middle Ages were called. The

people who did the farming in the Middle Ages were called *peasants*, or *serfs*, or *villeins* (vīl'īnz). It was their hard, back-breaking work which made it possible for knights to build tall castles, and for the leaders of the Church to build convents and beautiful churches.

The great farm, or manor, on which Pierre lived in northern France in the year 1235 would seem very strange to us. A manor was not made up of fields like the fields on our farms. Instead, the parts of the manor used for growing grain were divided into many long, narrow strips of land. Some of the strips were half a mile long and only a few feet wide. Between strips there were little ridges of earth or very narrow patches of coarse grass. On the next page is a picture-map of a manor much like the one on which Pierre lived.

The lord's house or castle stood on a hill by itself. Below the castle lay the church and a small village. In the village were the huts in which the peasants lived. To the east of the village was one large field of strips of land. This year the east field was not being used. Each year the strips in one of the large fields were not planted. The soil rested and became rich again. To the south of the village was another field of strips, and across the stream was the meadow, where wild grass or hay was growing. Beyond the



This is a map of a manor, such as Pierre lived on, but much smaller. Locate the lord's castle, the peasants' village, the woodlands, the pasture, and the three large fields, each of which was divided into many narrow strips.

meadow was the west field. Like the other fields, it too was divided into many narrow strips. Beyond the fields that were farmed were the woodlands of the manor. Each peasant could farm a few strips in each field of the manor. He could get firewood from the woods and keep hogs there.

After breakfast Pierre and his father went out into the crooked, muddy road that ran through the village. Here they joined their neighbors, who were on their way to start the long, hard day's work. Their neighbor Paul and his children were on the way to the woods to chop wood for the lord of the manor. Louis was to spend the day with some of the other peasants digging the moat around the castle wall deeper. Roger was on his way to tend the hogs which lived on the acorns in the woods. Roger was the swineherd for all the manor. Most of the peasants were on the way to the fields to work on the strips of land.

"We must try to finish our planting today, Pierre," said his father. "Tomorrow and the next day we must work on our lord's land. We do not know how long this good weather for planting will last."

The sun was up as Pierre and his father reached their strips of land. Earlier in the spring the great wooden plow drawn by eight oxen had plowed all the strips in the field. After the plowing the men had smoothed the earth by dragging a tree over the field.

Today they scattered on their strips in the field the precious barley seed saved from last year's crop. If they had a good season, they would harvest about four times as much barley as they were sowing. To-day farmers know how to fertilize the soil and change their crops each year. Our farms today grow much more grain than the manors in the Middle Ages did.

Pierre and his father worked all the morning sowing and tramping down the barley seed. The sun climbed high in the sky. The peasants stopped work long enough to eat a mid-morning meal of black bread and cheese which they had brought with them. After their short rest all the workers went back to the work of planting. Many women and children worked in the field, too.

Pierre's mother and younger brothers and sisters often worked in the fields. Today, however, Pierre's mother was working in the little garden behind their hut in the village. Earlier in the week she had loosened the soil with a clumsy ax. With a wooden rake she had made the soil finer and smoother. She dropped the seeds of peas, beans, turnips, and cabbages in rows in the garden. The children followed her and covered the seeds carefully. The warm spring sun felt good to Pierre's mother and the children as they worked in the garden. They were delighted to see the blossoms on the little apple and pear trees from

which they hoped later to get fruit. They thought the fruit good, but to us it would seem poor and sour.

When the sun was sinking low in the west, the peasants returned from their work in the fields. Pierre and his father were pleased to see how much work had been done in the garden. The family gathered around the iron pot filled with vegetables boiled with a little salt meat. The meal tasted very good to the tired workers. Before everyone went to bed on the hard dirt floor, Pierre's father said, "The wheat and rye are growing well this year. If we have enough rain we should have a very good crop. Then no one on our manor will have to go hungry next winter."

Early in the summer the peasants harvested the wheat and rye that had been sowed the fall before. Late in the summer came the busiest time of all the year on the manor, for then the crops planted in the spring were ready to be harvested. All the peasants worked in the fields cutting the grain with sickles and binding the sheaves of grain by hand. The cutting and binding of the grain was very hard work, but everyone was happy, for the crop was good. Now it was almost certain there would be no famine on the manor this year. The only danger to the peasant's food supply might be war. If an enemy lord came, he would be almost sure to set fire to the village. His soldiers would destroy the huts and the grain stored

there for the winter. The grain stored in the lord's castle would not be enough for all the peasants. The people of the Middle Ages always lived in fear of war and famine.

For hundreds of years food was raised in Europe in about the same way that it was when Pierre was a peasant boy on a manor in northern France. About one hundred fifty years ago, however, people began to farm in new and better ways. Our ways of raising and carrying food are much better than they were in the Middle Ages. We shall read more stories later on about better ways of farming.

Sand-Table Scene

You would enjoy making a model of a manor of the Middle Ages on the sand table. Show the strips in the fields.



These pictures show some of the kinds of work done by peasants. The first picture shows a peasant threshing grain with a flail; the second, carrying baskets of turnips; the third, cooking; the fourth, shoe making; the fifth, a shepherd with a sheep. Can you draw pictures showing Pierre at work?

Reels for Your Movie

Have you made scenes for your movie which show how men farmed in ancient Greece and in the Middle Ages?

For the Class Museum

By this time you have seen many pictures of the tools used by the farmers of Ancient Times and in the Middle Ages. Perhaps you would like to make models of the tools for your class museum.

New Words

manor

serf

peasant

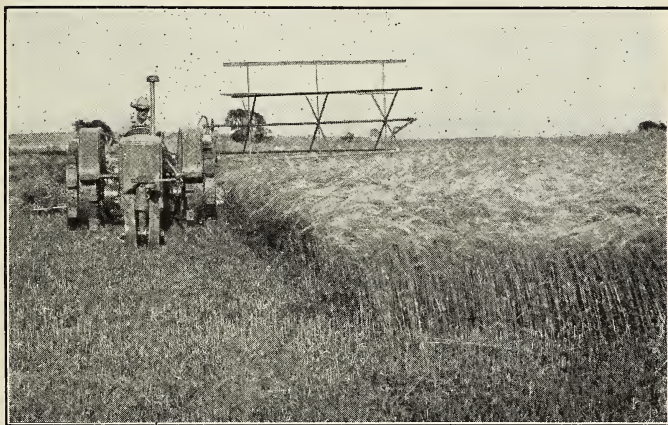
Reading Time

There is a story which you could read and tell to the class on farming in the Middle Ages. It can be found on pages 127-135 of Knowlton and Wheeler, *Our Past in Western Europe*.

Four Ideas about Farming

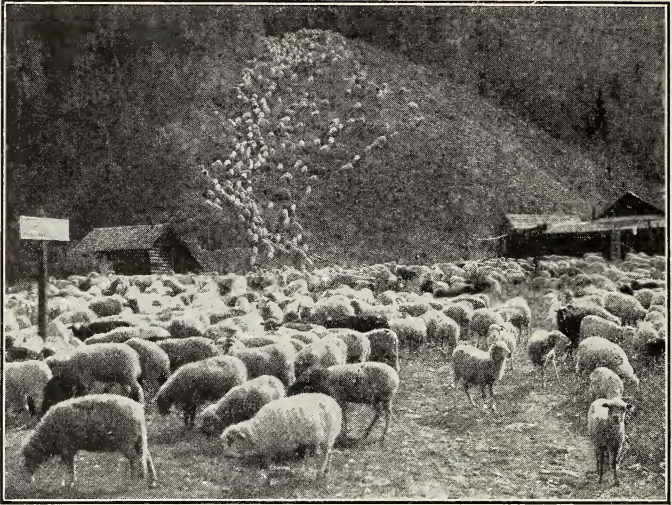
You have been reading about Joseph and Damon and Pierre and their ways of farming. You should get four important ideas from these stories.

1. The stories you have read show that *different parts or regions of the world grow different kinds of crops*. The rich Nile Valley grows fine wheat, but wheat does not grow easily on the hillsides of Greece. There the farmers grow fine olives. In some parts of the United States today farmers grow wheat. In some



Case

A LARGE FIELD OF GRAIN IN WISCONSIN

*Ewing Galloway*

This land is very good for grazing. Would it be as good for growing grain?

other parts oranges are grown. Some regions are best for raising sheep or cattle. What does your part of the country grow best?

2. *As people have tried to grow foods in different regions, men have learned more and more about farming.* The Egyptians were among the first to learn to plant seeds and harvest crops. Egyptian farming teaches us that mud from rivers helps to make soil more fertile. In Greece farmers learned about cutting wide steps or terraces on the hillsides. In the European

manors of the Middle Ages the peasants worked at strip-farming. Some of the methods of farming are good. Others are bad. When people of all regions exchange their ideas about farming, they learn more about how to grow foods.

3. *As men have learned more about farming, a few people have been able to raise enough food for many people.* In primitive times, people had to spend much time hunting for food. In early Egypt almost everybody worked in fields. Today it does not take nearly all the people to grow enough food for us. Some people work in factories. Others work in stores. More than half the people in the United States today live in cities. Our farmers know a great deal about farming, so that they can grow enough food for themselves and for all the rest of us.

4. The most important thing of all for us to remember is that *knowing how to grow foods well makes it possible for men to live safer and happier lives.* Think how much better off we are than primitive men! Because men today know so much about farming, we have many kinds of food. There are fewer famines. We eat every day some kinds of food that even the richest king of olden times could not have. We are much healthier than primitive men were. We must not forget that our way of living depends partly on

good farming. As farming improves, civilization, or our way of living, improves.

For Your Notebook

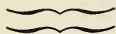
Close your books and see if you can write the four important ideas about farming.

Giving a Play

Perhaps your class would like to divide into three groups and each give a play. One play might be about farming in Egypt, another about farming in Greece, and another about farming in the Middle Ages.



PLOWING—as pictured in a book of the Middle Ages.



George Washington, Farmer

Over two hundred years ago a boy named George Washington was born on a farm in Virginia. He was a fine lad and grew to be a famous man. He was general of the American armies in the war that gave the United States its freedom from Great Britain. He became the first President of the United States, and is often called the "Father of His Country." Washington was a brave soldier, an able President, and a good business man. He was also one of the best farmers of his time.

The farm or plantation on which Washington lived after he grew up was called Mount Vernon. There Washington had a beautiful home. His "mansion house" was on a great hill overlooking a broad bend of the Potomac River. Along the side of the house facing the river was a porch or portico fourteen feet wide and a hundred feet long. There Washington and his family liked to sit and receive their guests. Back of the house were flower gardens and vegetable gardens. There, too, were barns and stables, a cool milk house, workshops, and cottages for the slaves. Washington owned many slaves, but he set them all free at his death.

Mount Vernon was a large plantation, but the soil was not very fertile. Washington tried in all the ways he could think of to make his soil more fertile. You remember that the Nile River overflowed each year and left a rich layer of mud on the fields. The Potomac did not overflow and spread mud over the land; but Washington had some rich mud hauled from the river banks and spread over his fields. He was always looking for ways to make crops grow better.

Most of Washington's neighbors grew tobacco in some of their fields. Washington thought that tobacco made the soil poor, so he grew other crops. He grew many acres of wheat and corn. He tried new crops such as alfalfa, which makes the soil richer. He wrote letters to friends in England and France and Spain asking them what kinds of crops they grew on their farms. He tried to buy new kinds of seeds to plant in his own fields. In his garden at Mount Vernon were plants from other parts of North America, and also from China and Africa and Europe. Washington was always trying to grow new and better crops on his plantation.

The farm tools used in Washington's time were very poor. Washington wrote to his friends everywhere asking about new tools for farm work. He sent to England for a new kind of plow. At one time he invented a new tool with which to plant seeds.



GEORGE WASHINGTON AND THE PLANTER HE INVENTED

His "planter," though not as good as ours today, was better than those used before his time.

Washington was interested in raising animals as well as crops. He owned cattle and hogs and fine horses. He was one of the first farmers in Virginia to raise sheep. He bought different kinds of sheep and different foods for them. Finally he had a herd of good fat sheep which produced much fine wool every year.

The king of Spain once sent Washington three mules. They had long ears and brayed loudly, but they were good workers. Washington prized them greatly. He even wanted to use them to draw his coach. Wouldn't it seem queer to see the President of the United States riding down the street in a fine white coach drawn by long-eared mules? When Washington died he left on his plantation 36 horses, 72 mules, 329 cattle, 640 sheep, and a very large number of hogs.

Every day when Washington was at Mount Vernon, he rose at daylight to see that work was begun. Then he had breakfast. After breakfast he rode all over his plantation on horseback. He visited every field to see how the crops were growing. He told his workers what to plant and how to care for the soil. He went to the barns, to the gardens, and to the mill. He inspected the animals. He studied everything he

saw. As he rode along on his horse he tried to think of new ways to make his farm better.

Washington was what we should call a scientific farmer. He studied how to farm just as an engineer studies how to build bridges. He read all the books about farming that he could find. Wherever he traveled he asked about new plants and new machinery. He tried many new ways of farming at Mount Vernon. Once he planted one kind of seeds in four different kinds of soil to see which soil would make the seeds grow best. He kept records of how much his farm cost and how much it grew. All these things helped to make him a scientific farmer.

We know much more about farming today than Washington knew, but he was one of the best farmers of his time. His careful study of farming helped to teach farmers of today how to get the best crops from their fields. When we honor Washington on his birthday, let us think of him not only as a great general and a great President, but also as a good farmer.

New Words

Look in your dictionary to be sure you know the meaning of the following words.

plantation

a scientific farmer

alfalfa

planter

Add the new words to your list. Use them in sentences. In Unit I what was Washington called? How many words with which to describe Washington do you know now?

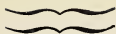
Bulletin Board

Put a picture of Washington on your Bulletin Board. Call it "An Early Scientific Farmer." Be sure that you can explain what that means.

A Visitor

Find pictures of Mount Vernon to show the class. Ask someone who has been to Mount Vernon to visit your class and tell you about it.

Make a list of the most important ideas in the story.



The Boy Who Saw the First Reaper



SCYTHES

*International Harvester Co.*

CRADLE

About one hundred years ago, a boy named Philip lived on a farm in western Virginia. Every summer he helped his father with the plowing and planting and all the other work on the farm. The hardest work of all was the cutting or reaping of the grain.

One day Philip and his father were in the fields cutting wheat. Philip's father used a tool called a *cradle*. Cutting grain with a cradle was very hard work. Even a strong man could not work with it more than a few hours at a time in the hot sun.

Philip was not big enough or strong enough to cut wheat with a cradle as his father did. He used a sickle. A sickle is a long curved knife. With it Philip could cut only a little wheat at a time. When Philip and his father reached the end of the field, his father said, "Philip, should you like to go with me tomorrow to our neighbor's farm? A man named Cyrus H. McCormick will be there with a machine that he has made. He says that his machine will cut grain."

Slowly Philip straightened up. His back hurt from the work he had been doing. His arms and shoulders ached from cutting the wheat with a sickle. "A machine that will cut grain!" he exclaimed. "Why, if Mr. McCormick's machine works, he probably can cut grain very fast, can't he, Father?"

"If the machine works well, Philip, it will make the greatest change in farming that has happened since men first learned to farm. Men have almost always cut their grain the way you are cutting ours today, with a sickle. Hundreds and hundreds of years ago, the Egyptian farmers used the sickle to cut their grain. The workers on the manors in the Middle Ages cut their wheat and oats and rye with a sickle. The scythe and the cradle are the only improvements that farmers have made so far in cutting grain. You see, Philip, man has always cut his grain by hand. Tomorrow we'll see if a machine can do the work."

The next morning Philip and his father arrived early at the neighbor's farm. There were many farmers in the crowd that had gathered to look at Cyrus McCormick's strange machine. Some of the people in the crowd laughed at it.

One farmer said, "Cyrus McCormick's father tried to make a machine that would cut his wheat for him, but it didn't work. And I don't think this machine will work, either. Farmers will always have to cut their wheat and oats and barley and rye by hand."

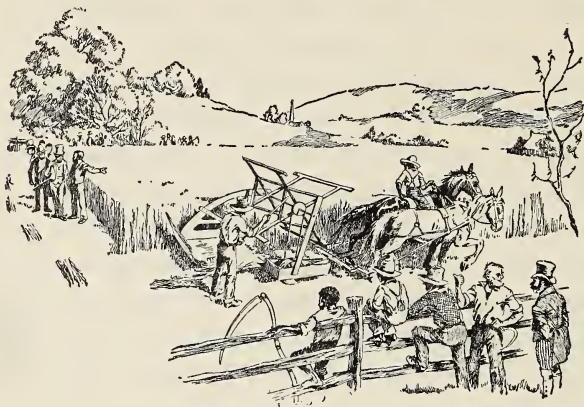
Soon Cyrus McCormick arrived and hitched his horses to the machine. Everyone wondered, "Will the machine really work?" The horses moved forward. Then, with a great deal of clatter, the knives on the machine began to move back and forth. The reaper worked! A machine was really cutting wheat!

The reaper had not gone far, however, when the farmer whose wheat was being cut shouted, "Stop! Your machine is rattling the heads off my wheat!"

Then another farmer said to Mr. McCormick: "Take down the fence here and cross over into my field. I'll give you a fair chance to try your machine."

McCormick drove the noisy reaper into the neighboring field. He drove around and around the field, cutting grain as he went. For several hours Philip and his father stayed with the crowd that watched the reaper—the machine that cut grain. There

it was, cutting strip after strip of wheat. When McCormick stopped, he had cut six acres of wheat.



WATCHING MCCORMICK'S REAPER AT WORK

As Philip walked home with his father, he said, "Father, I should have needed twelve days to cut as much wheat with my sickle as Mr. McCormick cut in a few hours with his machine."

On the day that Philip watched Cyrus McCormick's reaper, he saw one of the most important events in the long story of "How Men Have Learned to Farm." Since that time men have worked to make the reaper a better machine for cutting grain. Many other machines have been invented to help do the farmer's work. Machines are farmers' helpers in raising food for all of us.

Bulletin Board

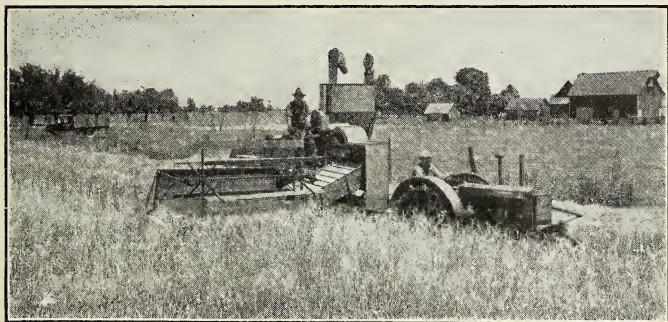
On your Bulletin Board you will want to put pictures of machines that help farmers today.

Ask your teacher if you can make this story into a play.

Find out more about Cyrus H. McCormick. One book that tells about him is Frank P. Bachman's *Great Inventors and Their Inventions*, pages 142-160.

Word List

Add the names of farming tools to your word list.



This picture, from a recent photograph, shows a modern reaper combined with a threshing machine, and drawn by a tractor.



Brown Bros.

LUTHER BURBANK on his farm in California.



How Luther Burbank Worked with Plants

"I wish I could grow better potatoes," said a Massachusetts farmer to himself many years ago.

The farmer was Luther Burbank, who was born in Massachusetts in 1849. When he was a very young man he bought a small farm. At that time the farmers of Massachusetts and states near by grew many potatoes. But these potatoes were reddish in color, and small, and did not keep well.

"If someone could find a large, white potato that tastes good, all the farmers and all the people who eat potatoes would be glad," thought Burbank. So he decided to try to grow that kind of potato.

One day, as he was walking through his potato patch, he found a potato seed ball. Potato seed balls are very rare. A potato plant usually starts as a sprout from one of the "eyes" of an old potato. What the farmer plants in the rows of a potato field are not seeds, but pieces of old potatoes. But now Burbank had found some real potato seeds.

There were twenty-three seeds in the seed ball. From them Burbank grew twenty-three potato plants. The potatoes from two of these plants were different

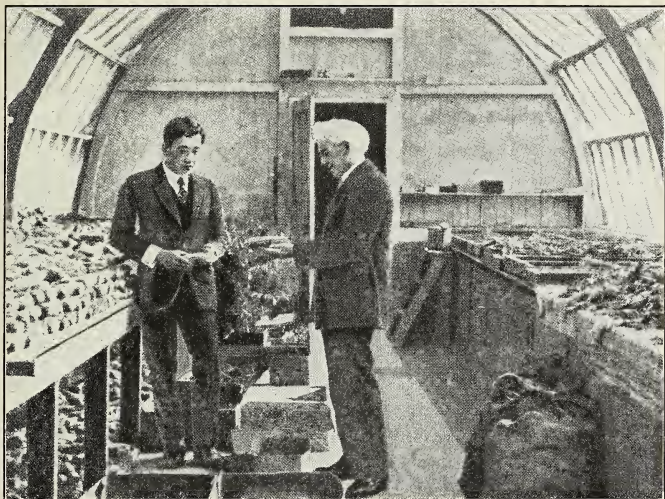
from the others. They were better than the small red potatoes. The next year, he carefully planted the new kind of potatoes.

Trying out a new thing in this way is called an *experiment*. In Burbank's experiment with potatoes he learned about some of nature's laws. He kept on experimenting. Finally, he was able to grow the new potato that he wanted. It was large and white, and everybody liked it.

The experiment with the potato taught Burbank that he could work with nature. He spent the rest of his life learning how to grow new kinds of plants—often by helping old plants to bear better and better seeds. He moved to Santa Rosa, California, where he bought a farm. He became a famous scientific farmer. His experiments were so important that people from many parts of the world visited his farm every year.

One day a man came to Burbank and said, "Many people like to eat the small French pea because it is very sweet. But it is very expensive to bring peas all the way from France. Couldn't we grow some peas just like them in America?"

"I think we can," answered Burbank, after he had thought about the question. "Give me time enough to experiment and I'll find out how to grow peas that are small and sweet."



Burbank did much of his work in greenhouses. Here he is seen with a Japanese assistant.

So Burbank began to experiment with peas. He knew the secret of the French peas. They were picked some time before they were ripe. Before peas are ripe they are partly filled with sugar, but as they ripen the sugar turns to starch and the peas grow larger. The secret is to pick the peas at just the right time.

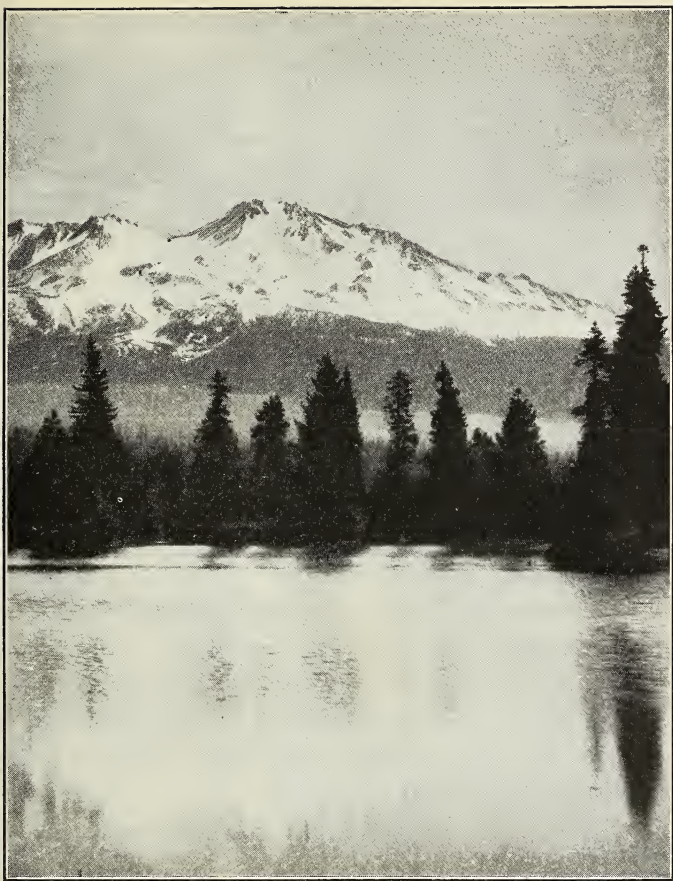
In France men and women work for small wages and the farms are small. It is easy to have the peas picked by hand. But in America the laborer is paid more for his time and many farms are very large. The best way for some American farmers to pick peas

is by machinery. Burbank found that his task was to help nature grow peas so that all the peas in a large field would be ready for picking at the same time. Then the picking machine could pick the peas just when they were sweetest.

Burbank thought that he would have to experiment with peas for some years. But as farmers in California can grow two crops of peas each year, it took him only half as long to find the right kind of pea for the American farmer to grow. It was just as sweet as the French pea and did not cost so much.

Burbank liked flowers very much, especially the daisy. He knew many different kinds of daisies. The Japanese daisy is small but its petals are waxy and white. The Michaelmas, an English daisy, is poor in color but very large. The New England daisy is not very large but the plant is sturdy and grows many blossoms. "Why not take all the good points from each of these daisies and make a new kind?" thought Burbank. So he set to work on a new experiment.

Finally, Burbank had the daisy he wanted. It was large like the English daisy, waxy and white like the Japanese daisy, and the plants were strong and grew many blossoms like the New England daisy. This new flower he named "Shasta" for the snow-covered mountain that he could see from his farm.



Ewing Galloway

MOUNT SHASTA. This picture shows how Mt. Shasta looked to Luther Burbank. Why do you suppose he named his daisy after it? See if you can find out exactly where Mt. Shasta is and how high it is. Why are there trees in the foreground of the picture but none on top of the mountain?

Today Shasta daisies are grown in gardens all over the United States.

Once Burbank happened to read a book written many years before by a sailor. In it the sailor told about a plum he had eaten in Japan, and said it was the most delicious plum he had ever tasted. At the time Burbank read this book, the American plums were small with large stones and with juice that puckered one's mouth. They could not be shipped like other fruit because they would not keep well. Burbank decided to grow an American plum as good as the one the sailor described.

Burbank sent to Japan for some Japanese plum trees. He experimented with the Japanese and American plum trees for many years. At last he was able to grow just the kind of tree he wanted. Because of his success, America now has plums with small stones and sweet juice. Plums can be shipped now to any part of the country.

What Burbank did with the potato, the pea, the daisy, and the plum, he did with many other fruits, vegetables, and flowers. He lived to be seventy-eight years old. He died in 1926. He was buried under a cedar tree beside the house in Santa Rosa where he had lived so long. His experiments had proved to the world that man can work with nature to grow the kind of plants he wants.

New Words

Find out what your dictionary says about these words:

experiment
nature

delicious
sprout

Find out more about Luther Burbank to tell the class. Add his picture to your Bulletin Board.

Drawing Time

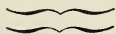
Draw for your notebook the plants on which Burbank experimented. Call them "Plants We Owe to a Scientific Farmer."





Ewing Galloway

A FEW OF THE MANY FRUITS AND VEGETABLES WE HAVE TODAY



Farmers from Coast to Coast

Uncle Frank, who owned a big farm in California, had traveled by airplane across the United States to visit his nephew Ralph's family in New York.

That evening, at dinner, Ralph said, "Tell us, Uncle Frank, what you liked best of all in your trip."

"I don't have to think long to answer that question," said Uncle Frank. "I was interested most in seeing the farms. My trip by airplane gave me a good idea of how land is farmed in the United States."

"Did you see all the farms in the country?" asked Ralph.

"Oh, no," replied his uncle. "You would have to take a great many trips to see all of the farms of our vast country. You would have to go north and south, east and west, and all along the coasts."

As Uncle Frank spoke he took a map out of his pocket. He spread it on the table so the whole family could see it. "Let's pretend we are going by plane to see all the farmers of our country at work," he said. "Where should you like to go first?"

"I know where I'd like to go," said Father as he helped himself to potatoes. "I'd like to go to Maine, where the farmers grow so many potatoes."

"All right," laughed Uncle Frank. "Here we go." Uncle Frank traced the route from their home to Maine as he talked. "Now we are flying over the farms of Aroostook County, Maine. More potatoes are grown here than in any other county in the United States. Down below us you can see the fields all plowed and ready for planting. Here and there you can see a farmer. He is sitting on the seat of a potato planter which is pulled by horses up and down the rows. The machine drops pieces of potato the right distance apart, and covers them to the right depth. All the farmers are hoping for a good season. If the crop is good they may gather more than two hundred bushels of potatoes from every acre they plant."

"These peas are delicious," said Mother. "I'd like to see the market gardens that grow them."

"You won't have to go very far from home to see a market garden," said Uncle Frank. "Market gardening is carried on close to most of the large cities of our country. Very good soil for market gardening is found along the Atlantic coast from Long Island to North Carolina. During the winter and early spring vegetables are also sent from Florida and California and Texas to northern cities. We'll head our plane for a market garden in New Jersey. No doubt the trucks and trains we see below us are carrying the vegetables to the city now."



Ewing Galloway

MARKET GARDENING. The upper picture shows men picking tomatoes in a large market garden in New Jersey; the lower one, a cabbage field in an irrigated district of California and Arizona.

"How black the soil is here!" exclaimed Father. He was pretending that he really was looking down from the plane at a market garden.

"In soil like that, all along the coast, cabbages and tomatoes and onions and lettuce and other vegetables are grown," said Uncle Frank.

"I'd like to see a wheat field now," said Ralph, as he took another slice of bread.

"All right, we'll go to a farm in Kansas," said Uncle Frank. "Kansas is one of the leading wheat states of our country. There you will see miles and miles of level ground all planted in wheat."

"How do the farmers do all the work for such large farms?" asked Ralph.

"Not by hand, you may be sure," replied his uncle. "See that big machine down there in the field? It cuts and threshes grain at the same time. It takes the wheat farmer today, with the help of machines, only two hours to do the work he used to do in sixty-four hours."

"Farmers certainly must be glad that machines were invented," said Ralph.

"Yes, and they are glad for other things that help them, too," said Uncle Frank. "I wish I could take you to an experiment farm. There experiments are made with seeds, with soil, and with farm animals. These experiments help farmers very much. They

learn what crops to plant in different kinds of soil, and what kinds of animals to raise."

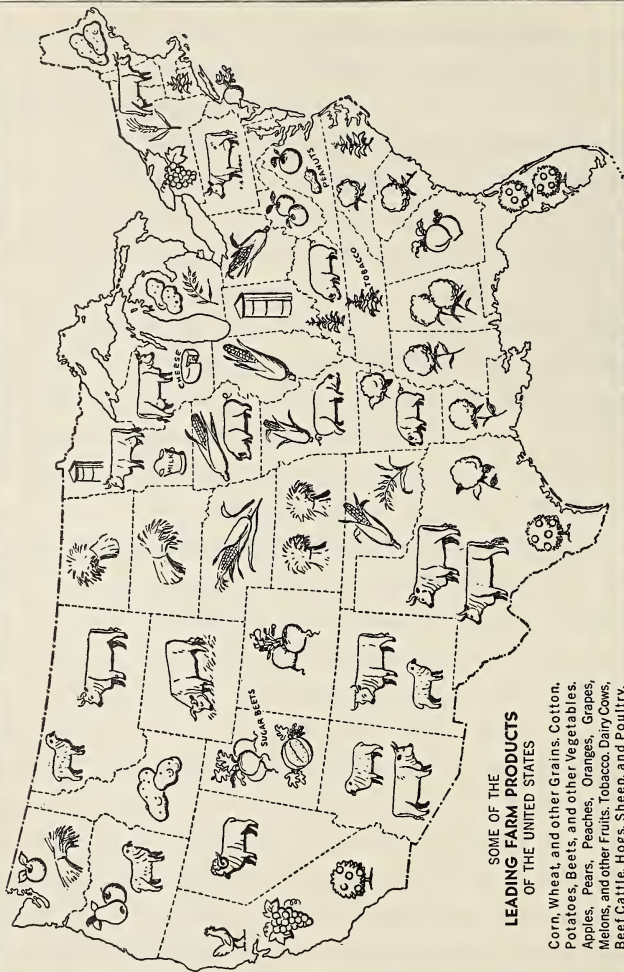
"I'd like to see a dairy farm, now," said Mother, as she poured some cream on her pudding.

"Let's fly to Wisconsin, where there are many dairy farms," said Uncle Frank. "By the way, did you notice the silos all the way from Maine to Kansas? A silo is a tall round building used to store the corn which the farmer feeds his cattle during the winter. Farmers have learned that they can cut up the corn plants when they are still green, and can store the pieces in silos. They make very good food for cattle."

"Shan't we pass through the 'corn belt' as we fly across the country?" asked Father.

"Yes, there is more corn grown in the corn belt of the United States than in any other country in the world," said Uncle Frank. "Look for hogs as we pass over the corn states, too. The hogs are fattened on ripe corn before they are sent to market."

The family took one trip after another in their imagination. They went south to see where rice, cane sugar, and cotton are grown. They went to Florida and California to see great orchards of orange and lemon and grapefruit trees. In California they saw many miles of vineyards, where grapes are grown. They saw apple orchards in Washington. As they turned back across the mountains and flew over the



SOME OF THE
LEADING FARM PRODUCTS
OF THE UNITED STATES

Corn, Wheat, and other Grains. Cotton, Potatoes, Beets, and other Vegetables. Apples, Pears, Peaches, Oranges, Grapes, Melons, and other Fruits. Tobacco. Dairy Cows, Beef Cattle, Hogs, Sheep, and Poultry.



PICKING APPLES, in the state of Washington.

Great Plains they saw flocks of sheep and many herds of cattle. They saw more orchards in Virginia and Maryland and Pennsylvania and other states, more vineyards along Lake Erie, and more dairy farms in New York and other states.

"I don't think we need to worry about going hungry after all the food we have seen on our trips," said Mother when the family had ended their imaginary journey by plane.

"With so many sheep and so much cotton we ought to have plenty of clothes," said Father.

"How many different kinds of crops farmers raise for us!" said Ralph.

"What I noticed while taking the trip," said Uncle Frank as he put his map back into his pocket, "was the many different kinds of machines that were working for the farmers. The farmers have learned many new ways of growing food."

"I can understand, Uncle Frank, why you liked the farms best of all on your real trip across the country," said Ralph. "I enjoyed the farms of our country even on a make-believe trip."

An Airplane Trip

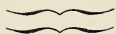
Pretend you are taking an airplane trip across the United States. Tell the class what you would see the farmers doing as you travel. Show on a map where you travel on your imaginary trip.

A Farm Visit

Ask your teacher to take you to visit a farm. Make a list of the machines the farmer uses and the kinds of food he raises.

New Movie Reels

What new reels have you added to your movie showing "How Men Have Learned to Farm"?

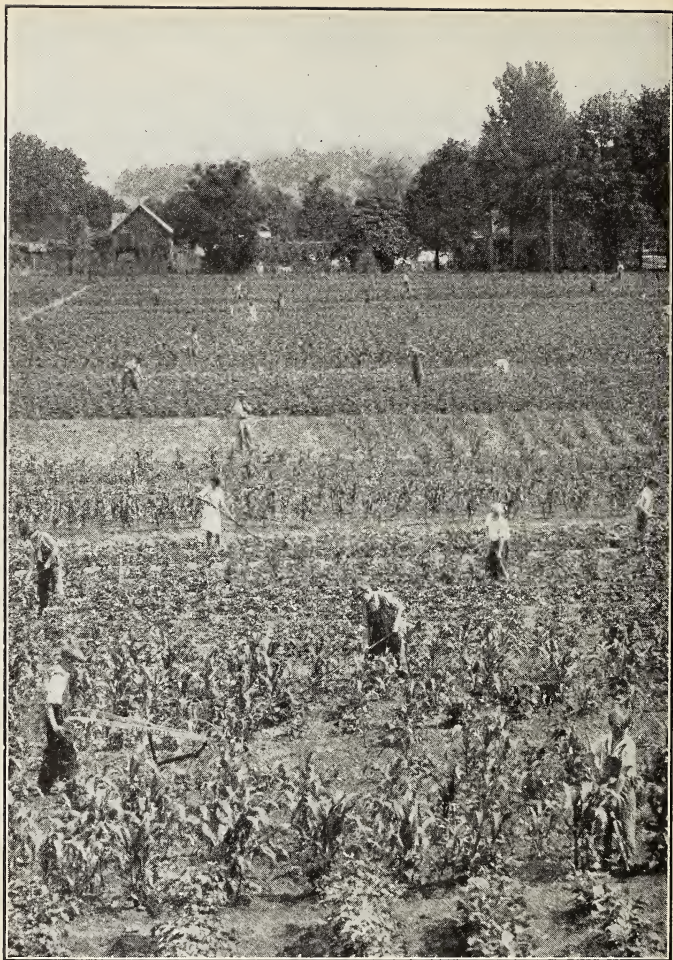


Better Ways of Farming

Hundreds of years have gone by since men first learned to plant seeds and grow food on farms. In that time many changes have taken place in the ways of farming. There are three kinds of changes which we should remember.

1. *New tools and farm machinery have been invented* to make farming easier and better. To get the ground ready for planting seeds, the first farmers used only sharpened sticks. With the sticks they punched holes in the ground for the seeds. Then someone made a wooden plow such as the Egyptians used. In the Middle Ages plows were still made of wood but were large and heavy and hard to use. Today we have sharp steel plows that dig into the dirt deeply, and harrows that break it up evenly. Seeds have a better chance to grow.

McCormick's reaper took the place of the old sickle and the cradle on many farms. Great threshing machines have been invented which separate the kernels of grain from chaff and straw. Tractors rather than horses pull many machines on farms today. Farmers today use tools and machines not even dreamed about two hundred years ago.



Ewing Galloway

These boys and girls go to a school in Indiana. In school they study how to grow plants, and they work in these gardens.

2. *Many kinds of plants are grown today* which were not known to the farmers of earlier times. Some of these plants were discovered when North America and South America were settled. Potatoes were not known in Europe until they were discovered growing in the mountains of South America. Now they are grown all over the world. The Indians of North America were growing corn when the white men found them. Seeds of corn were carried back to Europe, and now corn is grown wherever the soil and weather are right for it. A favorite dish of Italian boys and girls today, called *polenta*, is made of corn. If seeds of corn had not been carried from America to Europe, *polenta* would not be known in Italy today.

Many seeds brought from other parts of the world are grown now in the United States. The early settlers brought apple seeds with them, from which our great apple orchards come. The Indians living in America had never eaten oatmeal until white settlers began to grow oats. Nowadays, the United States government sends searchers all over the world looking for new kinds of seeds and plants to grow in this country. Alfalfa, a kind of hay which is very good for the soil, was brought to this country from Europe. A very famous plant hunter, known as "Chinese" Wilson because he lived in China so long, found hundreds

of kinds of new plants which were shipped back to the United States. Some of them would not grow in this country, but others are now grown on many American farms.

3. *Farming has changed because of the experiments and discoveries* of scientific farmers. Men like George Washington and Luther Burbank have experimented with better ways of growing things. In the United States today there are many schools and colleges where people go who want to study farming (page 294). They learn about soil, and how to make it more fertile. They find out what is the best food for chickens and hogs and cattle. They make our farms grow more food for our use each year. They are always searching for new ways of making our foods grow better.

Writing Time

Imagine that some of the farmers of the past meet a farmer of today. Write a story about what they would say to one another.

Your Notebook

Complete your notebook on Learning How to Farm. Put into it all your pictures, your lists, your summaries, and ideas and tests on the stories about farming.

Test

Write in your notebook the name of each man listed in Column 1 below, and after his name write the one phrase in Column 2 which best describes him.

1	2
Cyrus H. McCormick	1. Invented the cotton gin
George Washington	2. One of the first scientific farmers
Luther Burbank	3. Inventor of the reaper
"Chinese" Wilson	4. A man who improved many plants
	5. Brought many new plants to the United States
	6. Lived on a wheat farm in the West

Where in the United States are there many dairy farms? Also tell where these foods grow well:

oranges	wheat
potatoes	corn
apples	grapefruit
rice	grapes

Reading Time and Talking Time

"How the Early Settlers Got Their Food" is an interesting story in Waddell and Perry's book called *Long Ago*. You will find it on pages 127-138.

In Tillinghast and Colman's *Colonial Life in America* and in MacElroy's *Work and Play in Colonial Days* you can find stories of the way our ancestors farmed in the days when George Washington was a boy.

In Knowlton and Gill's *When We Were Colonies* is an account of "Living on the Old Farms," on pages 310-330.

S. E. Forman, in *Stories of Useful Inventions*, has stories of the most important tools and machines needed in farming. On pages 73-84 you can find the story of the plow. On pages 85-96 is the story of the reaper.

You will find other good stories about inventions that have helped to give us more food and better ways of farming in the following books:

Bachman, Frank P., *Great Inventors and Their Inventions*, pages 142-160. (Reaper)

Bruner and Smith, "The Story of Agriculture," in *Social Studies*, Book I.

Carpenter, Frank G., and Carpenter, Frances, *The Foods We Eat*.

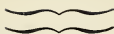
Lent, Henry B., *Grindstone Farm*.

Nathan, Adele G., *The Farmer Sows His Wheat*.
(Pictures of farming tools and machines)

Petersham, Maud, and Petersham, Miska, *The Story Book of Food*.

Tappan, Eva March, *The Farmer and His Friends*.

Watson, Elizabeth, *The Story of Bread*, and *The Story of Milk*.



Og, and the Farmers, and You

Thousands and thousands of years ago no people had our ways of living. Like Og, the man of whom you read on pages 10–15, they found their food in the forest. A primitive man often crept among the trees and bushes searching for something to eat. If he could find good roots or berries or leaves, he would eat them. If he could catch a small animal, he would eat that. If he could not find anything to eat, he would have to go hungry, for *he did not know how to plant seeds and make food grow*. Primitive people knew nothing about farming. They were probably hungry much of the time.

The first picture on the next page shows an Egyptian farmer, whom we may call Memes (mēm'ēz). He can do much more than gather, from wild plants, the seeds that are good to eat. He can sow seeds in the rich soil of the Nile Valley, and grow the plants. Learning how to plant seeds and grow crops is an important step in civilization. It is hard work to plant seeds by hand, as Memes has to do because he knows no better way. But it is better to grow food this way and have enough to eat than to depend on wild foods as Og did.



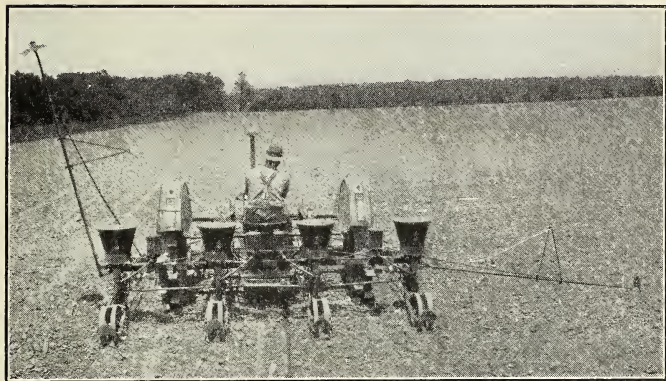
Memes sows seeds.



Thomas cuts grain.

Thomas is a farmer of the Middle Ages. He lived on a manor about a thousand years ago, and farmed his fields very poorly. Of course, he farmed as well as he knew how, but he did not know much more than the Egyptians knew about farming. He planted his seeds by hand, as Memes did. In the picture he is cutting his grain. The tool he is using is a sickle. Would you like to swing a sickle all day long in the hot sun? It was hard work, but Thomas got much of his food in that way.

Mr. Smith lives on a farm in Illinois. The farm has fine level fields of rich soil. In the picture on page 301 he is planting corn with a machine called a planter. See how different his way of planting grain is from the way used by the Egyptian farmer hundreds of years



Mr. Smith uses a modern corn planter.

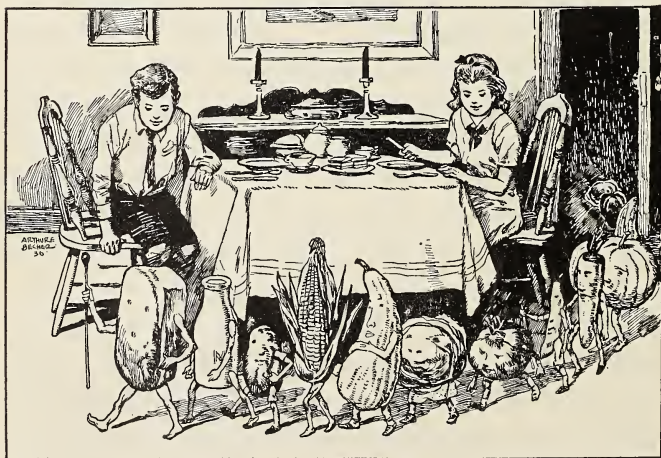
ago. Mr. Smith does not have to work as hard as Memes worked and yet he grows more and better grain. He is able to use many kinds of machines which the Egyptians knew nothing about. He knows more about seeds and soil and good ways of farming than Memes or Thomas knew. He helps to grow our food.

Mr. Jones lives on a farm in Minnesota. The chief crop grown on his farm is wheat. He may cut his wheat with a machine called a reaper, like the one in the picture on page 261; or he may use a combine, like the one shown on page 275. Have you ever seen a reaper at work? Mr. Jones can cut more grain in one day with his reaper than Thomas on his manor could cut in a whole month with his hand sickle.

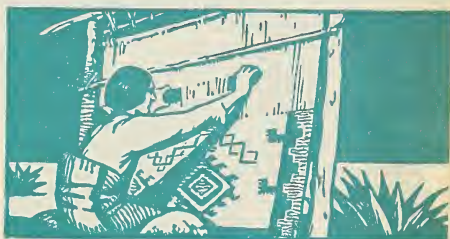
The last picture in this story is a picture of you. You are at the table, for it is dinner time. Into the dining room are walking bread and milk and vegetables. How many vegetables are there in the picture? Where did they all come from?

Pictures can tell us a very important story. These pictures tell us two things. First, *they show that farmers of today know a great deal more about farming than farmers of olden times knew.* Second, *better ways of farming bring more and better foods to all of us.*

Would you rather be Og, hunting for a few wild berries to satisfy his hunger, or yourself, with many kinds of food grown by farmers of today?

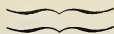


UNIT V



MAKING GOODS WITH HAND TOOLS





Peter's Ax

Everybody in camp was searching for Peter's ax. Peter and Jane and their father and mother, and Peter's chum Billy, who was spending a week in camp with them, were looking everywhere. They looked on the cabin porch, by the kitchen stove, and even down by the beach.

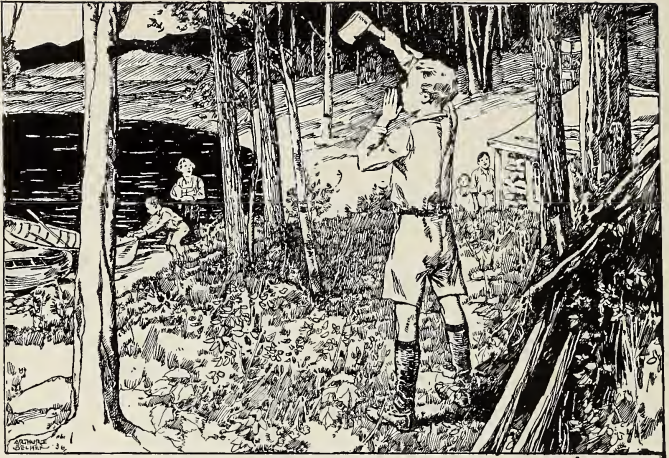
They had just returned from a canoe trip and were as hungry as bears. Their camp was far up in the woods, and they had no gas or electricity to cook with. They had to cook on a stove which burned wood, and they had to chop the wood for the stove. When they got back to the camp there was no wood chopped, and the ax could not be found.

"We can't have a good supper until we have some wood to burn," Peter's mother had said. Everybody had been hunting for the ax, getting hungrier every minute, and still it could not be found.

Suddenly Peter remembered where the ax was. He had used it that morning to mend the fence in the

Credits: Canadian National Railways; Keystone; Ewing Galloway

The pictures on the opposite page show ways of making things with hand tools. Can you name all the workers, the tools they are using, and the things they are making? How would the same things be made today? You can tell better after reading the stories of this Unit.



Peter shouted, "Here's the ax!"

woods back of the cabin. He ran to the spot and found the ax lying on the ground. Back to the cabin he rushed with it, shouting, "Here's the ax! Now we can get some wood and have supper. I'm as hungry as a bear!"

As Peter's father cut the wood, Peter carried it into the kitchen. Mother had started the fire, and Billy kept it burning. Jane set the table. Soon the odor of eggs and bacon and hot biscuits was coming from the kitchen. In a little while the whole family sat down at the table. As Peter looked at the tempting food before him, he said, "I'm glad we found that ax!"

"Yes," answered his father, "one can't go camping in the woods without a trusty ax. We use it in several ways. In fact, the ax is about the most useful tool that man ever invented."

"Hmm," said Billy, between bites of biscuit, "I never thought of that before. Who ever invented the ax?"

"Oh, I'm too busy to tell you now," answered Peter's father, as he helped himself to more bacon. "Ask me sometime later!"

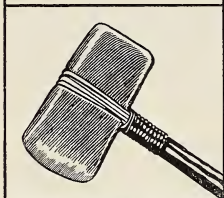
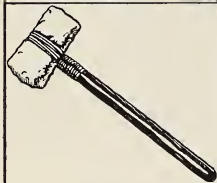
* * * *

After supper Peter and Billy chopped more wood for a campfire down by the beach. They had a fire there every evening, and Peter's father often told them stories before bedtime.

When they were all around the fire that night, Jane looked at the ax lying on the ground near the fire. It shone brightly in the firelight. Jane said to her father, "You said you'd tell us who invented the ax! Will you tell us now?"

Father laughed. "I didn't say just that, did I? To tell the truth, I don't think anybody knows who made the first ax. But I'll tell you all I do know about that useful tool." And he also glanced at the ax shining in the firelight.

"The first primitive men, as you know, had no tools. Little by little, they learned to make tools for



themselves. One of the first and most important of these tools was the ax. Probably some savage man used a stone to throw at wild animals. In a close fight he may have held the stone in his hand and hit the animal with it. Then he thought of using a stone as a hand ax, or fist hatchet, as it is sometimes called. The hand ax was a stone with one end shaped to fit the hand. There was no handle on the stone, but the man held it in his fist. Later, someone got the idea of putting a handle on the ax in order to get a better swing with it. Then it was easier to chop wood or to pound stakes."

"I'd hate to chop wood now with an ax which had no handle," said Peter.

"Of course all the axes of very early men were made of stone,"

The pictures here show a hand ax (an ax without any handle), two stone axes with handles, an early metal ax (used with a handle), and an ax of modern times.

continued Father. "At first the axes were very crude. Later men learned how to make polished stone axes with very sharp edges. With these better axes, men were able to make bows and arrows, houses, and boats. They cut down trees, and had firewood whenever they wanted it. The ax was even more useful to them than it was to us this evening."

The ax in the firelight seemed to glow with pride.

"Later men made bronze axes and iron axes. The Hittites, who lived in Asia Minor, were perhaps the first to make iron tools. Other people learned how from them. The Egyptians and the Greeks had metal axes. Without their good axes they could not have built boats and houses as they did. Without axes the Pilgrims could never have built their early homes in New England, and Western pioneers could not have built stockades for defense against the Indians. Axes are still used today. Thousands of them are made every year. As you know, we had to find our ax before we could cook our supper this evening."

The fire was burning low. In its pleasant light, the ax seemed to glow with life. It looked as if it might be thinking of all the great things its ancestors had done in the world.

As Father put out the fire before going to bed, Mother said, "I hadn't thought before how important an ax is, and how much good it has done for people.

The men who made the first axes so many hundreds of years ago certainly helped us a great deal. The invention of the ax has made it easier for people to live comfortably ever since."

* * * *

After vacation was over Peter and Jane and Billy went back to school. One day in Miss Tyler's class, Peter told about his search for the ax, and of his father's story at the campfire.

Miss Tyler and the class agreed that the ax is one of man's most useful inventions. "The ax is a hand tool," said Miss Tyler. "And for thousands and thousands of years people had only hand tools with which to do their work. In the last two hundred years machines have been built to help do our work, but before that time all the work was done with hand tools. Machines are run by steam or electricity or some other kind of power, but it takes human muscles to make hand tools work."

* * * *

The story of hand tools is an important part of the story of where our ways of living come from. Miss Tyler's class decided to read all the stories about hand tools that they could find. Some of the stories that the class liked are put in this book, on pages 312-369. Read them, and see what they tell you about Making Goods with Hand Tools.

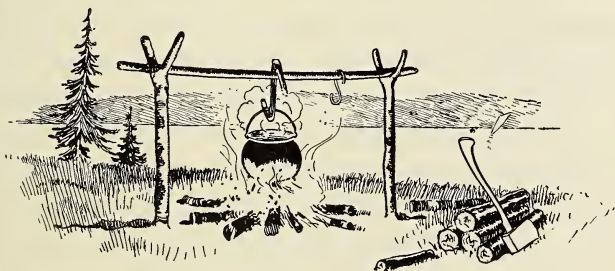
Finding Pictures

You will find many pictures to make a splendid Bulletin Board and a notebook for this Unit.

Making Things

Perhaps you would like to make several models or pictures which show how the ax was improved from a piece of sharp stone to the kind of ax we use today.

Start a collection of the tools which you make as you study this Unit. If you keep all these things you may have a tool museum.



How Pottery Was First Made



How a girl of primitive times made a bowl.

Thousands of years ago there lived a girl whom we shall call Tora (tō'rā). She did not live in a comfortable house, but in a cave. Tora liked to play with the mud clay she found along the river bank. One day she made a smooth round ball out of a lump of soft clay. She put her thumb into the ball and made a hole. Then she made the hole larger by pushing her fist into it. She squeezed the sides of the clay and so made the hole bigger and the sides thinner. Soon the ball looked like a bowl.

Just as Tora finished shaping the clay, her playmates called her to help pick berries. She left the clay bowl on a rock and forgot all about it. The next day Tora came again to the rock on the river bank. To her surprise, she found the bowl of clay with its thin sides just as she had left it, only now the clay was stiff and dry. "A good thing to carry berries in," thought Tora. So she filled the clay bowl with berries and took them to her mother.

Tora began to think about other ways in which she might use her bowl of dried clay. "I wonder if I could carry water in my bowl," she asked herself. In the afternoon she went with her playmates to the river for water. The other girls carried large nut shells and animal skins in which to get the water, but Tora carried her new bowl. How proud she felt when she filled the bowl with water!

Tora's playmates told her that the bowl would break. As they reached the cave, they began to laugh, and said, "See, Tora, your mud bowl is leaking. The water is dripping through the clay."

True enough, the bowl was leaking badly! Tora poured out the water. To dry the bowl, she put it close to the fire which was always burning at the opening of the cave. Then she went into the cave for a large nut shell to fill with water. Soon she forgot about the bowl.

The next morning when she came out of the cave, the fire was burning very low. There in the ashes at one edge of the fire she saw the bowl. She picked it up, and was surprised to find it hard and firm. She did not know it, but the fire had been made larger, with more wood, over night, and had baked the clay. Baked clay is always harder and firmer than clay which has been dried in the sun.

Tora liked the bowl and carried it with her when she went to gather berries. Later she took it to the river again, and found that it held water much better than it had before. She carried water in it to the cave, and this time her playmates did not laugh at her. When they saw how useful Tora's bowl was, they made bowls for themselves.

Soon Tora's people were making bowls of many shapes and sizes. First the bowls were shaped at the river bank, and then they were baked in a hot fire. The bowls and jars made of baked clay are called *pottery*. Later people used bowls and jars for storing grain and seeds and honey and for carrying water. When Tora's people learned how to bake pottery they had learned a very useful thing.

* * * *

Many hundreds of years passed after primitive people had made their first clay bowls. At the time when men were just beginning to learn how to write,



How does the potter's wheel help in making pottery?

there lived in Egypt a boy named Ankem. One bright spring day Ankem was carrying a message to the palace of the Pharaoh. When Ankem passed the workshop of the potters, or the workers who made pottery, he heard the "squeak, squeak" of the potter's wheel. Ankem knew that the potters made the jars and bowls for Pharaoh's table.

As soon as Ankem had given his message, he hurried back to the workshop of the potters. It was fun to watch the workers pound and shape the clay. But, best of all, Ankem liked to stand and watch the man working at the potter's wheel. The potter was sitting at a small table. The top of the table could be turned

around and around. The queer squeaking noise came as the top turned. On the middle of the table top was a bowl which the potter had just started to make. He was holding his thumb inside the bowl and pressing his fingers firmly against the outside of the bowl. With his left hand, the potter turned the round top of the table. As the bowl on the table turned between the potter's thumb and fingers it became smooth and evenly shaped. The part of the table which turned was called the potter's wheel.

On that day, five or six thousand years ago, Ankem saw how Egyptian potters made bowls and jars smooth with the help of the potter's wheel. The potter's wheel is a hand tool with which to make better pottery than can be made with the hands alone. If you visit a pottery of today with its machinery and huge ovens, called *kilns*, you will find workmen still using potter's wheels. Today the potter's wheels may be turned by machinery, or by the use of foot power, but for many hundreds of years



EGYPTIAN AND GREEK POTTERY

they were turned only by hand. The people who first learned how to make and use potter's wheels taught us much about making pottery.

About seven or eight hundred years ago there lived in China a chubby, yellow-faced boy named Ming Li (lē). Ming Li's father made beautiful and dainty teacups and bowls which we call *chinaware*. It does not seem possible that Tora's crude bowl and the dainty teacups that Ming Li's father made came from the same thing—clay—but they did.

Ming Li liked to watch his father. The father carefully worked the clay to get rid of all the little lumps. Then he shaped the dainty cups, smoothing them on a potter's wheel that looked very much like the

The pictures on this page show several kinds of CHINESE POTTERY. Some of them were very large. Do you like the colors on them?



one which Ankem saw in Egypt. One day Ming Li came into the workroom just as his father was spreading a thick liquid called *glaze* over the cups.

"Why do you spread glaze over the cups, Honorable Father?" he asked.

"You know, Ming Li," said his father, "baked clay has very tiny holes through which water slowly leaks. When the glaze is spread over the cups and baked, there will be no small holes."

"Oh, Honorable Father, I have never seen such a pretty blue cup as the one over there on the shelf!" said Ming Li suddenly.

His father smiled and said, "I took that cup out of the kiln just this morning. I mixed a little copper rust in the glaze, and that is why it became such a pretty blue. You may have the cup, Ming Li, if you like."

Ming Li's solemn little face lighted up with a smile and his black eyes danced with delight as his father handed him the pretty blue cup. Ming Li's father had just told him how glaze kept water from leaking through the clay. Ever after that day he used the blue-glazed cup to drink from.

* * * *

In the shop of Ming Li's father the beautiful china was made with hand tools. The potter's wheel was used to shape the clay. Brushes and other hand

tools were used to put the glaze on pottery and to decorate it. In these imaginary stories about Tora and Ankem and Ming Li, we see how important hand tools are. Today machines are used to make many of our dishes; but good ways of making pottery could never have been learned without the use of hand tools.

Making Pottery

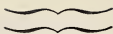
See if you can make a clay bowl. Perhaps you will be able to bake it until it is hard enough to hold water.

Visit a Factory

If there is a factory in your community where pottery is made, ask your teacher to take you to visit it.

Drawing Time

Draw a picture of the potter's wheel, or of Tora's bowl, or of the pottery Ming Li's father made.



The Lump of Gray Metal

Nog, who lived in primitive times, was very proud of his shiny bronze ax. It was a good ax. It was a much better ax than the stone axes his ancestors, earlier primitive men, had used.

One day when Nog and his father were walking in the woods his father told how Nog's grandfather happened to make a bronze ax. Often men had found lumps of tin stone and lumps of copper in the ground. They had broken and pounded these lumps into shape to see if they would make good tools. But they learned that both tin stone and copper were too soft to make good tools and weapons. Their crude stone axes, made of other kinds of stone, were better than axes of copper or of tin stone.

But Nog's grandfather had a new idea. "I wonder what would happen if the tin stone and the copper were mixed," he asked himself. So he melted the tin and the copper together, and when the mixed metal was cooling, he shaped it into an ax. The mixture of tin and copper is called *bronze*, and is harder than either tin or copper. The bronze ax was better than a stone ax. Soon all the men of the tribe were asking Nog's grandfather to help them make bronze axes.

As Nog's father was telling the boy about the making of bronze axes, they suddenly smelled smoke. They looked up and saw clouds of smoke drifting along over their heads.

"Run, Nog," cried his father, "tell your mother and the children to hurry to the lake. The forest is on fire and we have to run away for our lives."

The whole family ran to the lake and jumped into their dugouts. Then Nog's father and mother paddled the dugouts to the other side of the lake away from the fire. All the way Nog held his bronze ax carefully in his hand. At least he was not going to lose it because of the forest fire.

When the forest fire had died down, Nog and his father went back to the place where their bark house had stood. Nothing was left of their house and belongings except a few clay pots which were blackened by the fire. Nog had brought a long stick with him. While poking among the ashes, he spied a hard lump of gray metal. It was not like tin or copper or bronze. It was different in color and seemed harder than any of these metals.

Nog picked up the lump of gray metal and took it to his father. "Have you ever seen anything like this gray lump?" he asked.

His father looked at it very carefully and then said, "No, I have never seen anything like it before.



ARTHUR
BECHER
'36.

Nog's father is looking carefully at the lump of gray metal.

When I was a boy, I heard one of the old men in our tribe tell about a queer gray lump which he had seen. It may be, Nog, that this is some of the same thing. Keep it, and maybe some day we shall find out more about this queer gray lump."

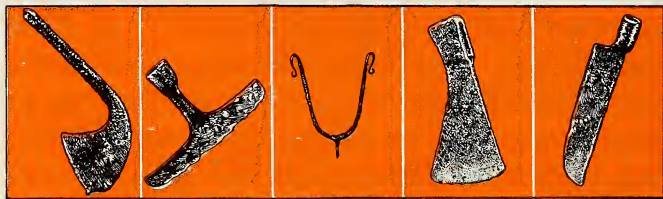
One day Nog and his father tried to melt the lump of gray metal, but they could not make a fire hot enough to do the work. While the lump of gray metal was hot, however, they pounded it and shaped it like an ax. It burned their hands to touch such hot metal, and so they poured water on it to cool it. When the metal was cooled it became hard again, even harder than it had been as a gray lump. This new ax which Nog and his father made was harder and sharper than any ax the men of their tribe had ever seen before.

Nog and his father were pleased with their sharp, gray ax. They wanted more than one. They wanted to make axes for the other men in the tribe. Where or how could they get the gray metal that made such good axes? They did not know.

As the days went by, the ax began to lose its shiny gray color. One day the rain fell on it and the ax became rusty. The red rust on the ax told its secret. Nog remembered that back of his old home there had been a bank of red earth. Could it be possible that this red earth had melted in the forest fire?

Nog and his father set about to find more red-colored earth. Finally they found some in the forest. They built a very hot fire and put the red-colored earth in it. They put more wood and still more wood on the fire. Then they let the fire die down. With long sticks they poked among the ashes. Nog's stick struck something hard. There it was, the very lump of gray metal they were hoping for! *Nog and his father had made iron, the most important metal in the world.* Without iron and the steel which men learned how to make from it, we could not have the fine hand tools and machines we have today.

Nog's father and grandfather had not known about iron, because iron has a queer way of being mixed with other things, such as sand, clay, or rock. We call iron mixed with other things *iron ore*. The iron ore has to be melted, or smelted, to separate the real iron from the other things. The red earth which Nog and his father found and smelted in the



Iron axes, an iron spur used by horsemen, and an iron knife, made by ancient peoples.

fire was iron ore. The lump of gray metal which was left after the fire had died down was iron.

After the time of Nog, men slowly learned better ways of smelting iron ore. They found that if there was not a good wind, the fire would not become hot enough to smelt the iron ore. They learned how to fan the fire to make it very hot.

For hundreds and hundreds of years men made iron in little furnaces. They slowly learned to make steel, which is harder than iron. When George Washington was President and even when Abraham Lincoln was a boy, a man had to work very hard to make a small amount of iron. You can see how precious iron would be when it was so difficult to make. From iron and steel, men made hammers, axes, saws, knives, and many other tools. With the help of these tools they could make many things that earlier people could not have.

Today we have huge furnaces and mills where iron and steel are made quickly and cheaply. From iron and steel many workers make fine tools and machines and countless other things that help to make our ways of living today.

Making a Play

This story would make a good play.

Collecting Things

Add to your collection samples of iron ore and iron in its different forms.

A Class Visitor

If you know of anyone who has visited an iron mine or seen iron ore smelted, ask him to tell you about it.



MINING IRON ORE in the state of Minnesota.

Learning to Weave Cloth



Courtesy Near East Foundation

MODERN WEAVERS WEAVING AN ORIENTAL RUG. The earliest weavers had no such good looms as this.

Tava (tä'vâ) was kneeling before the door of her cave home. On the ground there were spread out some strips of grass which she was weaving together for a dress. Over and under, over and under, her fingers pushed other strips of grass. As you have guessed, Tava was a primitive woman and lived thousands of years ago.

There was a time, long before Tava lived, when people did not know how to weave. They wore clothing made out of the skins of animals and the bark of trees. Perhaps the very first things to be woven were mats and baskets from reeds and grass, and fish nets from long, sturdy vines. From such weaving, primitive men learned how to make cloth by weaving grass or strips of fur together. Then they made clothes of cloth.

When Tava looked up from her work for a moment, she saw her husband, Nogar (nög'är), coming toward the cave. Nogar was carrying a little bundle of flax stems. Nogar's tribe knew that there were long, strong threads or fibers inside the stem of the wild flax plant. They learned that by twisting the fibers together they could make strong, soft cord. They used the cord to carry fish and small game and sometimes to tie their clothes together. Nogar sat down beside the cave door and started to pull the fibers out of the flax stems.

As he worked, Nogar watched Tava weave the grass over and under with her fingers. Suddenly he said, "I wonder if you could make clothes out of flax?"

"Who ever heard of clothes made from flax!" exclaimed Tava. "Fur and grass make very good clothing."

"I think flax would be cooler than fur and softer than grass," insisted Nogar. "I believe it would make very good clothing for hot weather."

After Tava had thought a while she decided that Nogar's idea might be a good one. She decided to try it. First, she twisted many long cords or threads of flax. Flax threads are called *linen*. Tava put some of the linen threads side by side upon the ground just as she did with grass before weaving it. Then she began to weave other threads across them with her fingers. The linen threads were thin and soft and would not lie flat on the ground. They stuck to her fingers, and tangled, too. Poor Tava! The harder she tried to weave the threads the more they tangled. The tangled threads puzzled Nogar. He wanted to help Tava, but how could he?

Nogar could see that the warp threads, those which run up and down, must be held tightly. If the warp threads were tight, Tava could weave the weft threads,



WARP THREADS and WEFT THREADS

woven together.

those that go across, more easily. So Nogar tied one end of the warp threads to the limb of a tree and the other end to a big stick on the ground. The heavy stick kept the threads straight and tight. Then Tava tried again. Very carefully she wove the weft threads in and out with her fingers. This time the threads did not tangle so much, and Tava slowly wove a piece of linen cloth. The weaving was coarse and uneven, but it was the very first piece of cloth! Nogar liked it very much.

When the other people of the tribe saw what Tava and Nogar had done, they wanted to learn how to weave cloth. As years went by, all of them, and the people of other tribes, too, were wearing clothes made of linen cloth.

It took great skill to weave fur and grass, but it took greater skill to learn to make cloth. The first people who really wove cloth gave a great help to our way of living. They probably learned in some such way as is told in this imaginary story of Tava and Nogar. After they had learned to weave linen cloth they slowly learned also how to make cloth from the wool of sheep and the hair of other animals, and from the fibers of cotton and hemp plants.

For many years women made cloth just about the way Tava did. In that kind of weaving it took a long time for the weaver to put the weft threads over and

under with her fingers. It was hard work, too, to tie the warp threads on the limb of a tree. It was very much easier, however, than trying to weave with the threads on the ground. Finally, after a long time, some weaver tied the warp threads to a wooden frame and fastened one of the weft threads to a thin piece of wood. The weaver used the piece of wood just as we use a darning needle. She pushed it over and under the warp threads, pulling the weft threads after it. Such a frame is called a *loom*, and the piece of wood is called a *shuttle*.

The first cloth woven on hand looms was coarse and heavy. As years went by, however, weavers learned to make beautiful cloth. They learned to dye their threads many colors. The first cloth was plain, but as time went on, people learned how to weave patterns into their cloth. They made designs of

The pictures here show several kinds of hand looms, from primitive to modern times.



flowers, birds, and people. In the Middle Ages the weavers even wove into their cloth pictures of knights riding on horseback!

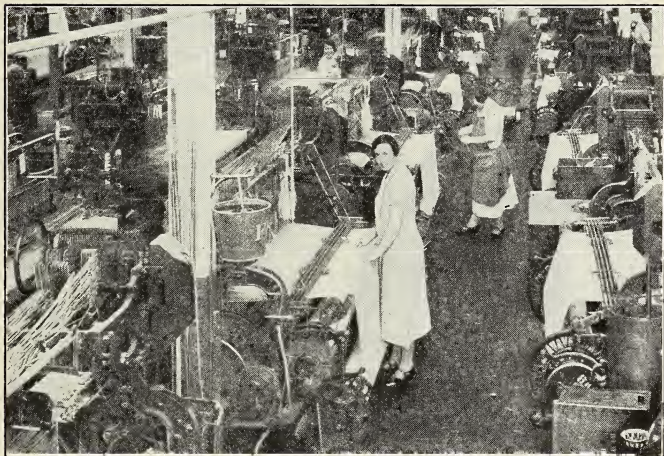
We do not know how long ago the hand loom was invented. We know, though, from stories of ancient writers, from pictures we find on ancient pottery, and from cloth wrapped around Egyptian mummies, that people learned to weave on hand looms long before the birth of Christ. Hand looms were used for hundreds of years. Many improvements were made in them, until the best hand looms looked like the looms which the Pilgrims brought from England to America.

Weaving by hand was very slow work, and most people could not have many clothes. But the wealthy people, who could have many workers weave for them, could have all the clothes they needed. Finally, about one hundred fifty years ago, a weaving machine—the power loom—was invented. Such a machine will now weave more cloth in one hour than many women could weave by hand in a day. With machines to weave our cloth for us we can have much more clothing. When we look at all of our comfortable clothes, however, let us remember that the idea of a weaving machine came from the hand loom. Let us remember, too, that it was primitive people who gave us our first lessons in learning to weave cloth.

Weaving Cloth

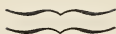
Try your hand at weaving. You could weave a mat of raffia or even a piece of cloth with a shuttle and loom.

In kindergarten you probably wove paper mats. If there is a real loom in your school building ask to see it. Make a hand loom for your tool museum. You can weave yourself a cap of yarn with a very simple shuttle and loom of wooden sticks.



Ewing Galloway

In this modern factory cloth is being woven by many machines.



Hats Off to the Early Makers of Tools!

Before men learned how to make tools for themselves they had very few comforts. Men did not have the skill to build houses of any kind until they knew how to make and use such tools as the ax and the hammer. Men could not defend themselves against the wild beasts in the forests until they had such tools as bows and arrows or battle axes. The first farmers had to have tools in order to plant and harvest grain. The people who wove cloth had to have looms to work with. The invention of tools was one of the most important things man did to help himself in the early days of his journey from primitive times to our civilized way of living.

We do not know who invented the ax, or the loom, or the hoe, or pottery. We do not know who first tanned skins or made cloth. We do not know who first built houses, or who first made bows and arrows or benches and tables. But we do know that we owe a great debt to the men and women who first learned how to make all these things. Learning how to make and use tools is an early and great step in the growth of civilization.

Reading Time

It will be fun to read and talk about things men learned to make long ago in primitive times. On pages 35-67 of Wells's *How the Present Came from the Past*, Book I, and pages 88-90 of Lansing's *Man's Long Climb*, you can find stories about man's earliest tools. In Thomas Hibben's *The Carpenter's Tool Chest* there are excellent pictures of the tools man has used from earliest times to modern times. Ask the librarian to help you find the book. It is hard reading, but maybe your teacher will read or tell you parts of it.

For a story about early workers in metal, see Lansing's *Man's Long Climb*, pages 86-87; and for a story of one way man may have found out how to make pottery, see pages 31-42 of that book.

For stories about weaving and spinning, see pages 43-75 and 80-82 of Burns's *Stories of Shepherd Life*.

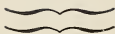
In books about primitive man you can find stories of the tools and other things men learned to make long ago. Here are some other books with stories about the early makers of things:

Fisher, Anthony R., *This Man-Made World*. (Stories about tools, pottery, wheels, sails, etc.)

Petersham, Maud, and Petersham, Miska, *The Story Book of Clothes*.

Watson, Elizabeth, *The Story of Textiles*.

Wheeler, Ida W., *Playing with Clay*.



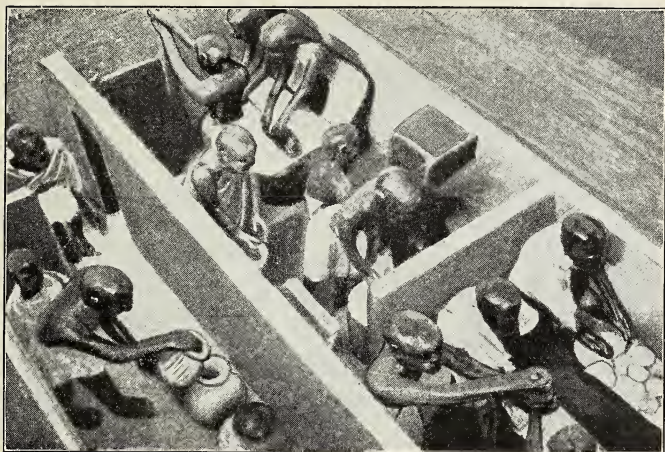
Little Clay Men from Egypt

Long, long ago there was an Egyptian nobleman who was very rich and powerful. He had many people working for him. His workers were able to make many beautiful and useful things.

The nobleman knew that his workers made his life more pleasant and comfortable. He liked to use the things his workers made. When he died, little statues of his workers were buried in his tomb with him. In those days the Egyptians believed that the statues in the tomb would work for the dead nobleman in the next world just as the real men worked for him while he was alive.

The little clay statues were in the nobleman's tomb for many hundreds of years. Then the tomb was opened and the statues were taken out. They were put in museums. Today, in a museum in the United States, there is a case with some of these little clay men from Egypt in it. If we look at them we can learn a great deal about the things the Egyptians had learned to make more than three thousand years ago.

First, there is a group of cooks and bakers, busily at work as shown in the picture (on the next page). The statues are only a few inches high. One shows

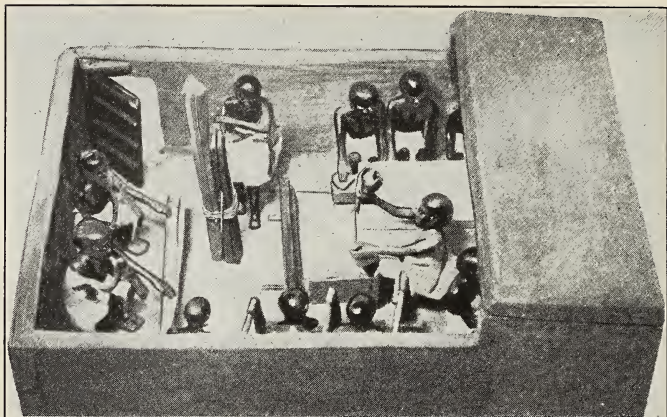


Bakers and pastry cooks at work, as shown by clay models in the tomb of an Egyptian nobleman.

an Egyptian workman kneading dough from which to make bread. Primitive men had not known how to make bread, but the Egyptians had ovens and baked good bread. The Egyptian nobleman had much better meals than primitive men had.

Another of the little clay men in the nobleman's tomb was a blacksmith. The Egyptian blacksmiths, with their forges, made iron tools and weapons. They were very important workmen, for their tools helped to give the Egyptians many comforts and luxuries.

The Egyptian carpenters had crude hammers and saws, but with their tools they helped to make homes



Carpenters at work, as shown by clay models in the tomb of an Egyptian nobleman.

and temples. The Egyptians made very fine and beautiful buildings. The carpenters also made furniture and chariots and boats. No wonder the nobleman had a group of carpenters put in his tomb.

The weaver must not be forgotten. He could spin thread and from it weave cloth. The Egyptians learned how to weave beautiful patterns into their cloths. Egyptian weavers made even finer linen than is made by the workmen and the factories of today.

Among the clay figures in the nobleman's tomb were many boatmen. The Egyptians learned how to build boats very early in their history, and the boatmen carried both passengers and goods on the river Nile.

The sculptor was one of the most skilled workers of ancient Egypt. The Egyptian sculptors made great stone monuments such as the Sphinx. They decorated temples and palaces. They carved the fine furniture. They carved the writing on walls and pillars which can still be seen in Egypt today. The beautiful things the sculptors carved made living in ancient Egypt more pleasant.

These are only a few of the little clay men from old Egypt. Many other workmen were making things in Egypt which added to the comforts of living there. The Egyptians owed a great deal to their makers of things. The baker, the blacksmith, the carpenter, the weaver, the boatman, the sculptor, and many others all helped to make life in ancient Egypt pleasant and more comfortable.

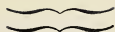
Do you think you owe anything to the bakers and the tool makers, the carpenters and weavers and boatmen and artists of today?

A Museum Visit

You would enjoy a visit to the museum to see the little clay men from Egypt. Try making some like them for yourselves. Make them out of clay. When they are dry, paint them with poster paint. Last of all, give them a coat of varnish.



This Greek potter, like Kerameus, is painting a beautiful vase.



The Jar that Kerameus Made

“Dorcas, I must work fast and well, for I have much work to do,” said Kerameus (kěř’ă-mūs) to his wife one morning. “I must waste no precious moments today.” Kerameus began molding the clay with which he was working, shaping it to make a tall water jar.

Kerameus was a Greek potter who lived in Athens about twenty-three hundred years ago. Just as there were skilled workmen in Egypt, so there were skilled workmen, or craftsmen, in Greece. There were bakers, blacksmiths, weavers, carpenters, tanners, potters, and other craftsmen. In Greece, just as in Egypt, all work was done by hand or with simple hand tools. The workers of each craft or trade in a Greek city usually lived in their own section of the city. There, the craftsmen had shops in which they made and sold their wares.

The most important craftsmen of the ancient city of Athens were the potters. They had learned to make many useful and beautiful things. Merchants came to the potters’ shops to buy great earthen jars in which they stored oil and grain. At the potters’ shops also Greek women bought stoves for burning

charcoal, clay cooking pots, and lamps. There the poor people bought clay dishes, and the wealthy their beautiful jars and bowls.

When Kerameus lived in Athens each craftsman tried to make his products both useful and beautiful. Kerameus was a master of his trade. He made many fine bowls and jars and vases. The Athenians knew that the pottery Kerameus made was strong and well-shaped and very beautiful.



DESIGN TAKEN FROM A GREEK VASE

Dorcas liked to stand and watch Kerameus work. How skillfully he molded and shaped the clay! As he patted and kneaded and smoothed the clay, Dorcas could see how much he enjoyed his work.

“Kerameus, for whom are you making that water jar?” she asked.

“It is a water jar for Plutos, the wealthy merchant,” replied Kerameus. “Plutos takes great pride

in his pottery. He wants even his water jars to be very beautiful."

"Plutos must have many very beautiful things in his home," said Dorcas.

"I wish you could see them all," replied Kerameus. He began to tell Dorcas how Plutos's house was furnished.

In those days, the homes of the wealthy Greeks were made of sun-dried bricks. Only public buildings and temples were made of marble and cut stone. The rooms of a house were built around an open court. In the center of the court was an altar to the household gods. Around the court was a porch, with a roof held up by pillars. The rooms often had no openings except doorways which opened upon the porch. Because the climate of Greece was mild the people lived on the porch or in the courtyard most of the time.

The rooms of the Greek houses were dark and plain, but they were much more comfortable than primitive men had known. The floors were made of hard earth and pebbles. Often the walls were covered with a paint made of water mixed with lime. The homes of the wealthy Greeks were furnished very well.

Dorcas was right. Plutos had many beautiful things in his home. There were couches, chairs,



THE OPEN COURT OF A GREEK HOUSE, with a porch all around it.

footstools, and tables. There were chests filled with cloth. Many of these pieces of furniture were made of dark wood and decorated with ivory, gold, or silver. Wreaths of gay flowers were hung on the walls. Charcoal stoves were used to keep the rooms warm in winter.

In every room there were jars. Some of the jars were filled with flowers. Others were used to carry water or to hold food. But Plutos had some jars just to look at because they were so beautiful. Many of the jars in Plutos's home had been made by Kerameus, the master potter.

As Kerameus talked, his nimble fingers fashioned the clay. First he made the bottom of the jar, then the tall graceful sides, and last the twisted handles. After making each piece with his hands he took it to the potter's wheel and rounded and smoothed it with great care. When the parts were done, he fastened them together so well that there were no cracks. Then he polished the surface until it was as smooth as silk, and put it into the kiln to bake. When the jar came out of the kiln it was hard and dull and golden brown.

Then Kerameus had to show his skill as a decorator. He painted the whole vase a dull red. On the red surface he drew pictures of men and women. He used black paint to make the outlines of the faces of the people, the folds of their clothes, and whatever they held in their hands. After the pictures were done, he painted the surface around them black. At last the jar was done, and Kerameus placed it carefully on a shelf.

When Dorcas saw the finished jar with its red figures on a black background, she cried, "O Kerameus, that is a beautiful jar! Plutos will surely like it! It will look well among the other fine things in his home!"

Plutos did like the jar that Kerameus made for him. "It will add much beauty to my house," he exclaimed when he saw it. "And," he said with a

smile, "the water from the well will taste sweeter when carried in this jar, for Kerameus, the master potter of Athens, made it."

Sand-Table Scene

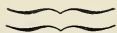
On the sand table make a model of a Greek home. Try to make it look like the one described in the story.

Make a Vase

Perhaps you would like to make a Greek vase like the one in the picture below. Your teacher will tell you how you may paint one if you do not have the materials with which to make one.



A GREEK VASE

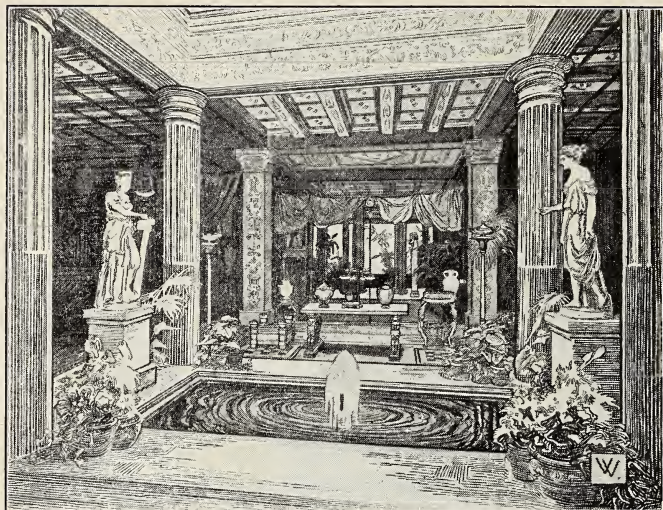


How a Roman House Was Furnished

“Drip-drop, drip-drop,” went the water clock that stood in the beautiful home of Julius. Julius was a wealthy citizen of ancient Rome, who owned many slaves. The work of Gaton (gä’tôn), one of the slave boys, was to take care of the water clock. When enough water had run through the hole in the upper bowl of the water clock, it was Gaton’s task to call out the hour and pour in more water.

Gaton’s work did not keep him very busy, and sometimes he became tired of listening only to the “drip-drop” of the water clock. During the long hours of the day, he had time to see what was happening in the home of Julius, the wealthy Roman. He liked to look at the furniture and decorations, and to see what comforts there were in the home of his master.

The house of Julius was like the homes of many other wealthy Romans who lived about two thousand years ago. In many ways a Roman house looked like a Greek house. The wealthy Romans, however, had larger and more beautifully furnished rooms than the Greeks had had. The rooms in each house were built around two large courts or open places. In one



From Metropolitan Museum of Art, New York

COURTS IN THE INTERIOR OF A ROMAN HOUSE

court there was a fountain, and in the other a garden of flowers.

Here and there in the courts and rooms of Julius's house Gaton saw statues made of bronze and marble. On a highly prized table of citrus wood stood a tall black and red vase from Greece. Gaton had heard his master explain to friends that it was a rare and priceless old vase made by a famous Greek potter. In the house were many couches. There were many more couches than chairs. Even in the dining rooms there were couches. We should think a Roman dinner

a very strange affair. All the diners reclined on couches beside low tables, instead of sitting on chairs as we do.

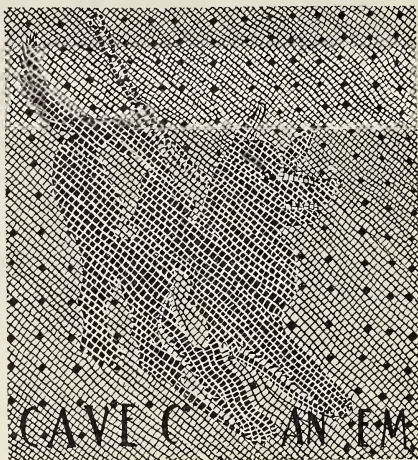
Gaton often had time to admire the beautiful workmanship of the chests and cabinets in the home where he was a slave. When he looked at the hangings in the doorways, he wondered about the workers who wove and dyed the colorful materials. On the couches and on the few chairs in this home there were beautifully embroidered pillows and cushions. On high stands of bronze there stood lamps which burned olive oil and lighted the house after sundown.

Once in a while Gaton was able to look into the kitchen. Here the cook and all the slaves who helped him were busy preparing delicious meals for their master and his family. The cook was very proud of his fireplace heated by charcoal, and of the beautiful iron and copper pans and kettles. Some of the slaves were kept very busy shining and polishing the pots and pans. When Gaton saw what hard work they had, he felt very fortunate that it was his work to tend the water clock and call out the hours.

On days when it was very cool, Gaton did not see many members of the family in the court. While he shivered watching the clock, they kept themselves warm in two or three rooms of the house. Part of the floor of these special rooms was made of hollow tile pipes. Through these pipes hot air came from a kind

of furnace, and warmed the rooms. Such comfort was not for Gatón and the other slaves.

One morning Gatón was so excited that he almost forgot to call out the hour. Some workmen had



PART OF A ROMAN MOSAIC FLOOR

The Latin words *Cave Canem* mean
"Beware of the Dog."

begun to re-lay the floor of the second court. They used marble and beautifully colored little stones to make the floor. They carefully arranged the colored stones so that they made beautiful pictures. Day after day the men came, for it took them a long time to lay the floor. They had to place each little stone exactly right in order to make the pictures. When

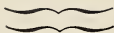
they had finished, Gaton thought the new floor the most beautiful thing he had ever seen. There were pictures of armed soldiers, horses and chariots, and gods and goddesses in the stone and marble floor.

Gaton thought that the best picture was the one of Alexander the Great. Alexander the Great had conquered a large part of the world. He had helped to spread Greek ways of living in his great kingdom.

The "drip-drop, drip-drop" of the water clock continued, and Gaton called out the hours. To Gaton every minute seemed to have wings. There were so many stories to think about when he looked at the painting on the walls and at the beautiful marble and stone work on the floor. Gaton thought that it was very pleasant to be in the home of the wealthy Julius. Most of all he liked the many things Roman workmen could make. How comfortable and beautiful these things made his master's Roman house!

Sand-Table Scene

Draw a plan of a Roman house. If you did not take part in making the Greek home, perhaps you may co-operate with a group of classmates in making a model of a Roman house. Furnish it as it is described in the story. Can you make the floor of the court tell interesting stories?



More Comfortable Ways of Living

You have just read about the home of a wealthy family in ancient Rome. The Roman family had a beautiful house with many rooms. The rooms were well furnished with couches, cushions, rich hangings, lamps, pottery, tables, and chairs. Greek homes also were comfortable and beautiful. The Greeks and the Romans knew how to make many things. Their skill in making things gave some people very comfortable homes.

Compare the Greek and Roman homes with the cave or hut in which a primitive family of very early times lived. Primitive people sat on stones or logs or on the floor; they had no couches or cushions such as the wealthy Romans and Greeks had. The Romans and Greeks had lamps, but primitive men had only their open fires to give light after the sun had gone down. Primitive people slept on the ground, wrapped in skins, but Romans and Greeks knew how to make beds and soft couches. There were iron kettles in Roman and Greek kitchens, but the early savages had no kettles or pans in which to cook food. The Romans ate their meals served in dishes at tables, but primitive people squatted around the fire

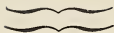
and ate their raw or poorly roasted food held in their hands.

It is easy to see that the reason the Greeks and Romans could live more comfortably than primitive people was because they were skilled in making more and better goods. They had many hand tools and skilled workmen. With the tools the workmen made things both useful and beautiful. The Greeks and Romans lived more comfortable lives than primitive people lived. Do you see why? It was partly because the Greeks and Romans made many hand tools and knew how to use them. Making things with hand tools made the ways of living better.

Writing Time

Write a summary about more comfortable ways of living. When the summary has been corrected put it in your notebook.

Make lists showing what things were in the home of a wealthy Greek, and in the home of a wealthy Roman.



What Time Is It?

“What time is it?”

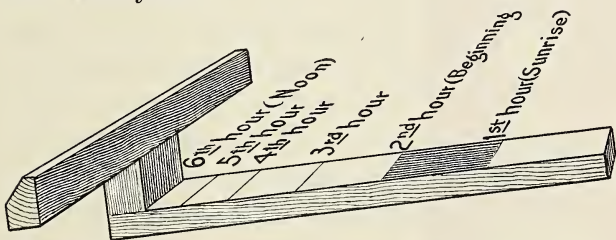
When you read this question, look at the clock on the wall and see if you can tell exactly what time it is. You think it is easy to answer the question, “What time is it?” But people have not always had clocks and watches like ours. Man has not always been able to tell the time as easily as we can today.

A boy or girl of primitive times could not tell exactly what hour of the day it was. The best anyone could



What time is it?

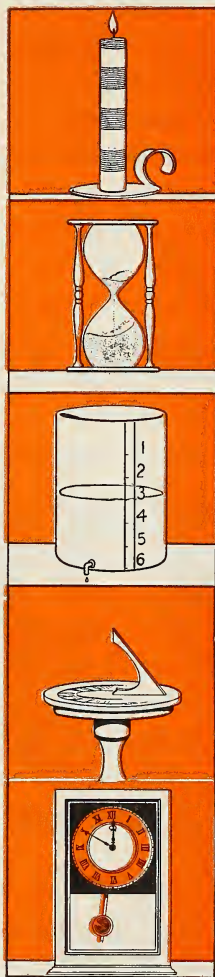
do then was to look at the sun and guess the time. Primitive people sometimes told time by looking at the shadows of trees or hills. Wouldn't it seem queer to hear somebody say, "We have dinner when the shadow of our house touches the foot of the big tree in our front yard"?



The Egyptian shadow clock showed the time by the shadow of the crosspiece at the left. It had to be set at different slants in the different weeks or months, and was not very accurate.

The ancient people who lived in the Tigris and Euphrates Valley found a way of telling time by the shadow on a sundial. The sundial is a flat plate with a slanting pointer above it which casts a shadow when the sun shines on it. From the direction of the shadow the ancient people could tell fairly correct time. But the sundial is of no use on cloudy days or during the night. Neither can the sundial be carried around easily as we carry our watches.

Finally, the Babylonians and Egyptians found a way of telling time when the sun was not shining. They learned how to make water clocks. Do you



remember the story of Gaton who took care of the water clock in the home of Julius, the Roman? That water clock had two bowls, one above the other, and water dripped slowly, through a tiny hole, from the top bowl into the lower one. The lower bowl was marked off with lines, so that the watchers could tell the time by looking at the line to which the water had risen. Instead of saying "The hour hand of the clock points to three," as we do, they would say "The water is at the three o'clock line."

The Greeks invented a sandglass which used sand instead of water to tell time. Small sandglasses could be carried from place to place. In Benjamin Franklin's time, in

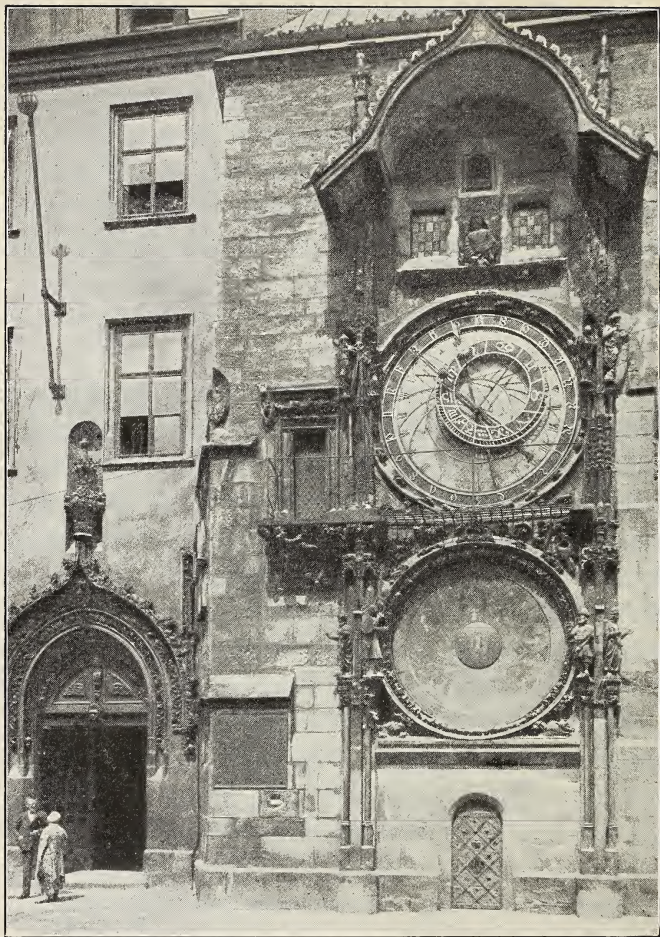
The pictures show five different ways of telling the time. To tell it by the use of candles, they must be made of the same size and with wicks just alike. The sandglass and the water clock are more accurate. The water clock shown here is different from the one described in the text. To make a sundial one must be sure to put the pointer at the correct slant, which is different at different distances from the Equator.

our own country, a minister often used a sandglass on his pulpit to tell how long a time he was preaching.

During many, many hundreds of years the best of the easy ways of telling the time were by the sundial, the water clock, and the sandglass. But these things were rather expensive, and only wealthy people were likely to use them. Most people, through all these years, had to tell the time by watching the sun or the moon or the stars.

Then somebody thought of the way to make a clock. Men who have studied the history of clocks tell us that the first timepiece we can really call a clock was invented less than a thousand years ago. The first clocks were very large and expensive; they were made for convents or for churches. Usually the clocks had bells or chimes which struck the hour, and the people in the towns were able to know the time by hearing the great clock strike.

These huge clocks of the Middle Ages were all made by hand, and some of them became famous. One of the most famous of them is the old clock in the cathedral at Strasbourg (stráz-bōor'), France. This clock, which was all made by hand, is as high as a three-story building. It not only tells the time, but shows the position of the sun, stars, and moon, tells the date, and does many other interesting things. When the clock strikes the hour at noon, a figure of a



Ewing Galloway

A CLOCK TOWER OF THE LATE MIDDLE AGES, built on the front of the city hall in Prague, Bohemia, in central Europe. The clock face, however, is modern, showing the hours from 1 to 24.

rooster flaps its wings, ruffles its neck, and crows three times. The men who made this great clock were very clever workmen—but it tells time no better than the little alarm clocks which waken people of today in the morning.

After men had begun to learn how to make clocks, they tried to make many kinds of clocks. They made very large clocks like the one in Strasbourg, and they made watches so small that they could be worn on a queen's finger.

Making clocks was slow and expensive work. Every little screw and wheel and lever and spring and all the other parts had to be made by hand. It is no wonder that clocks and watches were so very expensive that only kings and queens and other wealthy people could own them.

Some of the English, the French, and the Swiss people became very good watchmakers. In Switzerland, especially, the work of making watches became very important. Finally, a Swiss watchmaker invented a machine which would make clock wheels. For many years the Swiss workers guarded the secret of their machine, but even with its help most of the work of watchmaking was hand work.

During colonial times in our own country, and also for some years after the Revolution, there were not many clocks and watches in the homes of the

people. The first clocks made in our country were made of wood, and of course all the work was done by hand. It took a long time to make a clock then, and clocks were very expensive. Buying a clock in those days was about as expensive as buying an automobile today.

About a hundred years ago many workers, especially in the United States, began to invent machines to make the screws, springs, and other parts of clocks and watches. When one part of a watch or clock is worn out today, a watchmaker can easily put in a new part made exactly like the old one. No one has yet invented a machine which puts the parts of a watch together, and many skilled watchmakers fit together the large number of pieces that make up a watch. For very small watches the parts are so tiny that the skillful workers have to pick them up with tweezers and magnets.

It is only since men have learned to make machinery to do the work of turning out the parts that it has become possible to make many clocks and watches. Today almost every home has a clock, and most people have watches. We find clocks in stores and schools and in the towers of many churches and public buildings. Men have learned, too, to make clocks run by electricity. We say that it is easy to tell time. But when we look at our clocks and watches

today, we should remember that it took many workers hundreds of years to learn how to make the kind of timepieces with which we so easily answer the question, "What time is it?"

Making Things

Some of you will enjoy making models of the water clock, the sandglass, and the sundial.

Tell time by a sundial for one week.

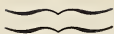
Talking Time

Imagine you are a clock or a watch and tell the story of how you came to be.

Bring to class a sandglass and show how it works.

Bulletin Board

Find pictures of famous clocks to paste on your Bulletin Board.



Making Books and Papers

Long ago the Romans were the most powerful people in the world. They conquered many other nations. As we have seen, they had fine homes and knew how to make many useful and beautiful things. But finally the Romans themselves were conquered. Strong barbarian tribes came from the northern forests and took possession of the Roman Empire. The barbarians were wild, warlike people. They were not civilized, and did not understand Roman ways of living. They burned many Roman homes and destroyed much beautiful furniture and pottery. They did not keep the Roman roads in repair. They destroyed many books which the Romans had owned and had prized very highly. Many of the barbarians did not know how to read and did not understand the value of books.

For many years after the barbarians had conquered Rome, there was very little order in Europe. People and their belongings were not safe from robber bands. Finally, a new king came into great power. His name was Charlemagne (shär'lë-mān), which means Charles the Great. Charlemagne was crowned emperor in the year 800; that is, more than eleven

hundred years ago. He was a powerful king who ruled sternly but wisely. Charlemagne tried to improve the barbarians' way of living.

Most of the people in Charlemagne's kingdom could not read. The king decided that there should be schools in his kingdom, and he called to his court a man named Alcuin (ăl'kwīn). Alcuin was Charlemagne's adviser for many years. He helped to teach the people better ways of living.

One of the best things Alcuin did was to make books for Charlemagne and his people to study. How do you suppose that Alcuin, the scholar, made books more than eleven hundred years ago? There were no printing presses such as we have now. There was not even the kind of paper we use in our books. The story of how Alcuin made books for the good king Charlemagne is an interesting story.

* * * *

When Alcuin made books for Charlemagne all the books had to be copied by hand, for printing presses were unknown. The people who copied the books were called *scribes*. Alcuin's scribes were men called *monks*, living by themselves in large groups, in convents or *monasteries* (mŏn'ās-těr-īz). The monks never married. They worked peacefully in their monasteries. In almost every monastery was a room where scribes sat and copied books day after day.

When Alcuin, the scholar, heard of a valuable book, he would borrow it and take it to the writing room of a monastery. There a young monk would sit and read the precious book aloud very slowly. As he read, all the other monks in the room copied down his words. They could not copy very fast, and often they made mistakes. As the young monk read the book, Alcuin would walk around the room looking at each copy being made. He would correct the writing if the scribes did not do it right. It took many days to copy even one book, but Alcuin had his monks copy many books for use in the kingdom of Charlemagne.

Sometimes a book would not be read aloud. One monk would work at it alone, reading it silently and copying the book by himself. Sometimes he would also make drawings in his copy as he went along. Many books of the Middle Ages had beautiful drawings in bright colors. These are called *illuminated* books. But always, no matter how many drawings were made or how large the book was, all the work was done by hand.

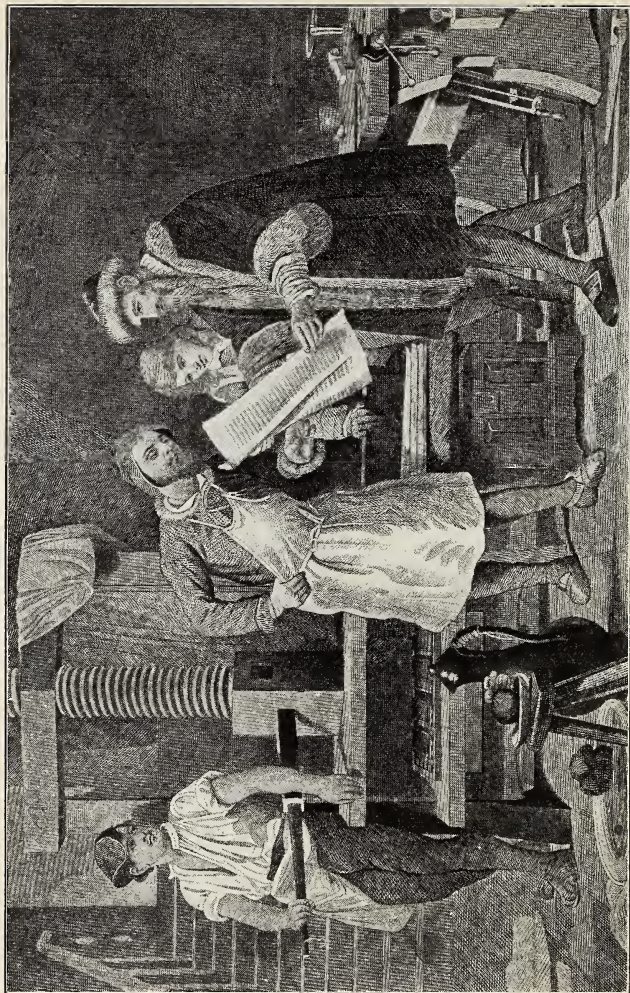
The most valuable books were written on parchment, which is a strip of sheepskin cleaned and stretched. The parchment pages would contain many beautiful illustrations. When the book was finished, the monks would put a binding on it. The binding was often

*Gramstorff Bros.*

MAKING BOOKS IN THE MIDDLE AGES, in a monastery. What kind of desk and what kind of pen is the monk using? What is a monastery?

made of wood. Sometimes it was covered with leather, and gold and silver decorations were put on the front of the book.

There were only a few libraries in Charlemagne's time. Books were very scarce. It took so long and was such hard work to copy books by hand, that very few books could be made. How would you like to copy a whole book by yourself? One monk of Alcuin's time wrote at the end of a book he had copied, "He who does not know how to write thinks it is not hard work, but though only the fingers hold the pen the whole body grows weary."



THE FIRST PRINTING PRESS. Gutenberg, the inventor, is examining a sheet printed by it.

About seven hundred years after Alcuin lived, a man in Germany invented a new way of making books. He carved letters on little blocks of wood, and later the letters were made of metal. Many rows of letters were fastened together and coated thinly with ink, and when paper was pressed against them a page of print was made. Then after another coating of ink, another copy of the page would be printed, and so on. The invention of *type*, as the wooden and metal letters are called, is one of the most important inventions in history.

The invention of type made it possible to print many more books and newspapers than people had had before. Yet printing was still hard work, and most of it had to be done by hand. Today, with great machines, the printing presses of a city newspaper can print over 1500 papers each minute. But in the time of Benjamin Franklin, who lived from 1706 to 1790, printing was almost as different from printing today as it was from the making of books in Alcuin's time.

Benjamin Franklin was born in Boston, and while still a young man he worked on his brother's newspaper there. Later Franklin went to Philadelphia and worked in a printing shop there. He was an able boy and a hard worker. By the time he was twenty-three years old he owned a newspaper of his

own. It was called *The Pennsylvania Gazette*, and was a very important newspaper.

For many years of his life Franklin was the best-known newspaper man in all America. He published his newspaper regularly and it was widely read. He printed many small books and pamphlets also. But Franklin and his helpers had to work very hard in their printing shop, because all their printing was done with hand tools and with a printing press that was worked by hand.

When the printers started to print the paper in Franklin's day, the first thing they had to do was to "set the type." The printer had to select the type for each letter, take one letter at a time and put it in its proper place. After all the type was set it was put in a box to keep it in place and then thick black ink was rubbed over it. The box of type was put in the printing press, and the blank paper on which the news was to be printed was placed over the type. Then a sort of "lid" pressed the paper against the type. When the paper was printed, the "lid" was lifted, the printed sheet was removed, and the type was inked for printing another sheet. Only one sheet of paper could be printed at a time. Instead of 100,000 papers an hour, Franklin's press could print only one side of a small number of sheets in an hour.

In Franklin's day almost everything was made by hand. Furniture, books, shoes, rugs, plows—all the tools and comforts people had—were made by hand. Hand printing presses like Franklin's were used in Europe and America for a great many years. Large modern printing machines did not take their place till more than a hundred years after Franklin's time. Do you think there would be so many newspapers for sale today if all of them had to be printed by hand?

Drawing Time

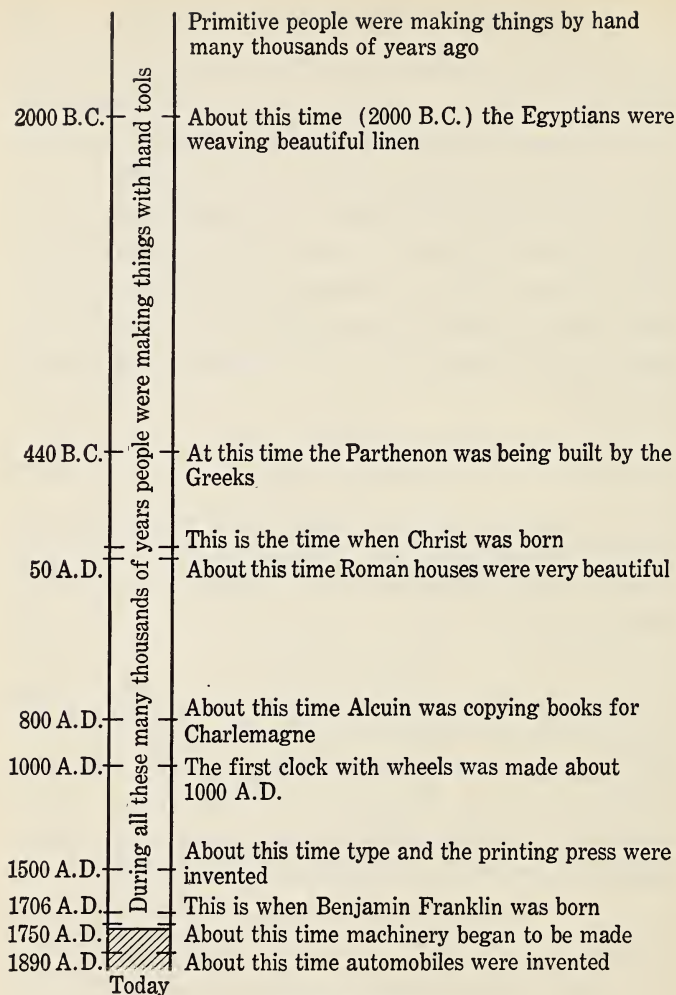
On a piece of drawing paper see if you can make a copy of a page from an illuminated book. If you cover it with shellac after it is painted it will look like parchment.

Three Visits

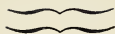
Ask your teacher to take you for a visit to the museum to see one of the early printing presses.

If you live near a large library, go there to visit and see how many books we can have today.

Visit the printing office for your town or city newspaper and watch how printing is done today.



A TIME LINE



The Story the Time Line Tells

A *time line* is a picture which is drawn to help us understand the length of time between events.

Before we can understand the story that the time line tells we must know what "B.C." and "A.D." stand for.

"B.C." stands for the words "Before Christ." When we read that the Parthenon was being built about the year 440 B.C., it means that the work was going on about four hundred forty years before Christ was born. "A.D." stands for "Anno Domini," two Latin words which mean "In the year of our Lord" or "Since Christ was born." Alcuin copied books for Charlemagne about 800 A.D., or about eight hundred years after Christ was born.

Can you solve this problem? About how many years was it between the time when the Parthenon was being built and the time when Alcuin was copying books for Charlemagne?

For many centuries all goods were made by hand. The word *century* means one hundred years. From the very earliest times until about 1750 A.D. there were no great machines to help workmen in their tasks. Notice the long open part of the time line

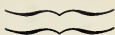
and compare it with the short shaded part at the foot. The open part of the line stands for the thousands of years when all goods were made by hand. The shaded part stands for the less than two hundred years in which we have had machines to help us.

Making a Time Line

Make your own Time Line. Let one end of it mark the year when you were born. Let each inch stand for one year. Place on the line at the right places the dates and description of the things that have happened to you, such as when you entered school, when you had the measles, etc.

Your class might like to decide together what events to put on your time lines. Make your own just as neatly as you can and include all the events you can recall.

You might help your class make a Time Line for the stories you have read in this book. Illustrate it to make an attractive picture border for your room.



The Long Procession of Workers

Imagine that you are standing on the slope of a very, very long hill. From where you stand, a long procession of people reaches along the hillside and across a great, endless plain. The line of people is so long that you cannot see the other end of it in the mists of the faraway plain.

All of these people in the long, long procession are the workers who have made things during all the ages. Here, beside us, stand the people who make our shoes, our clothes, our desks, our books, our radios, and homes today. A little way below us stand the workers of a hundred years ago, and a little below them the workers of two hundred years ago. We see Franklin working at his printing press and Washington trying to invent a better plow. Farther on, in the long procession of hand workers, we see the early makers of clocks. Still farther on we see, in the distance, Alcuin copying books for Charlemagne.

We see Roman workmen and beyond them Greek workmen. The Romans are making fine roads and building homes. The Greeks are making beautiful pottery and fine sculpture. Then there are the men



THE LONG PROCESSION OF WORKERS

of Egypt who made boats and furniture and ornaments. And we know that somewhere, far toward the end of the procession, are the people who first made iron and bronze tools, and the first people who made woven cloth, and the first people in all the world to make pottery.

Don't you think that the people in this long procession must be proud to be there? Civilization, or our way of living, grew because these workers learned how to use hand tools to make things. We owe a very great debt to the people in this long procession of workers.

Giving a Pageant

Give a pageant called *The Long Procession of Workers*. The hand workers of the past can come to the stage with their gifts and tell how they have made our ways of living possible.

An Exhibit

Arrange an exhibit of all the things you have made while studying this Unit. This can be your class museum.

Lists and Notebooks

Make a list of the things in your own home that were made by hand. Compare this list with the list a boy of ancient times might have had.

Compare your notebooks and make sure that you have included all the important lists and summaries and ideas in the Unit. Let the class decide which notebook is most complete and most attractive.

Test

time line	parchment	Romans
hand	Franklin	potter's wheel
iron	Alcuin	shuttle and loom
printing press	smelting	sundials
pottery	baked	workers
A.D.	water clocks	tools
ax	warp and weft	

On a sheet of paper write the numbers 1 to 18 in a column, and after each number write the word or words from the above list that are needed for the sentence of that number.

1. One of the first and most important tools was the _____.

2. Clay must be _____ in order to make it hard and firm.

3. A famous scholar of the Middle Ages was _____.

4. Two of the ancient ways of telling time were by _____ and by _____.

5. Primitive men had few _____.

6. An important metal that we get from the earth which is used for making tools is _____.

7. The tools used in weaving are the _____.

8. The invention that led to the making of more books was the _____.

9. One of the beautiful things with which the Greeks decorated their homes was _____.

10. A line which represents the dates when important things happen in history is called a _____.

11. In the Middle Ages books were written on _____ by hand.

12. Many _____ tools were necessary to the ancient ways of living.

13. A hand tool that is still used for making vases and jars is the _____.

14. The process by which iron ore is changed to iron is _____.

15. A famous printer of colonial times was _____.

16. The letters which mean "In the year of our Lord" are _____.

17. The little clay men represented the _____ of Egypt.

18. The threads used in weaving cloth are called _____.

Reading Time

More Books about the Ways Men have Made Things
with Hand Tools:

Lamprey, Louise, *In the Days of the Guild, and Masters of the Guild*.

Wells, Margaret E., *How the Present Came from the Past*, Book II. For a story of the things Egyptian workmen could make, see pages 15-31.

Bailey, Carolyn Sherwin, *Children of the Handcrafts*.

Stories you will like about real boys and girls who made things in our country before the days of many machines.

Ilin, M., *What Time Is It? The Story of Clocks*.

MacElroy, Mary H., *Work and Play in Colonial Days*.

Stone, G. L., and Fickett, M. G., *Everyday Life in the Colonies*.

Tillinghast, L. Morton, and Colman, E. M., *Colonial Life in America*.

Unit Study Books, No. 407: *Time*.

Waddell, John F., and Perry, Amy, *Long Ago*.

There are stories about man's way of measuring time in Lansing's *Man's Long Climb*, pages 112-123, and Forman's *Stories of Useful Inventions*, pages 187-202.

On pages 203-221 of Forman's *Stories of Useful Inventions*, is a story about the making of books from early times to the invention of the printing press.

In Haaren and Poland's *Famous Men of the Middle Ages*, pages 257-262, and in Frank P. Bachman's *Great Inventors and Their Inventions*, pages 187-207, you can find accounts of the earliest printing press.

Talking Time

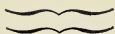
You have doubtless read many stories in the library books that tell how men have learned to make things with hand tools. Tell the most interesting story to your class. You might like to tell the story to your mother and father, too.

UNIT VI



EXCHANGING GOODS AND IDEAS





Where Books Come From

This is a story that Peter read aloud to Miss Tyler's class in school one day:

* * * *

Once upon a time there was a tall spruce tree growing in a forest. The forest was in Canada, the country north of the United States. One morning, very early, the spruce tree was awakened by a noise that was different from the wind or rain. As it listened, it heard the buzzing of saws, the ring of axes, and the shouts of men.

"The woodsmen are cutting down trees again," said the spruce tree to itself, "I wonder if I shall escape their sharp axes and saws this year?"

The spruce tree did not have to wait long for the answer to its question, for soon the woodsmen came right toward it. With their axes and a saw they cut across the trunk of the spruce tree close to the ground. Then the tree fell with a great thud. After the men had chopped off all the branches they hitched two

Credits: Publishers' Photo Service; Tacoma Chamber of Commerce

All through the ages people have traded. The pictures on the opposite page show some Egyptian traders, an animal market in France, a train carrying tomatoes from Florida to northern markets, a fruit market in Hungary, and lumber docks in Tacoma, Washington.



horses to the long tree trunk. The horses pulled the log down the hillside to a wide river. The river was full of logs, and the spruce tree knew that it, too, would soon be among them.

"Oh!" shivered the tree as it fell into the river. "This water is very cold!" But the spruce tree soon forgot how cold the water was, because it began to move. All the other logs were moving, too. They were all floating downstream. Where could so many logs be going?

After floating down the stream for several days, the spruce log and its companions came to a city. On the bank of the river was a big red factory. When the logs reached the factory, they were lifted out of the river and put through a machine that cut them into small pieces.

The pictures here show several steps in the making of paper, from the spruce tree being cut, to the large rolls of paper to be used in printing books.

When the sharp saws of the machine had done their work, all the pieces of wood were thrown into a huge kettle of water where they were boiled for a long time. Then the wood that once was tall trees growing in the forest, looked like thick, warm breakfast food. The spruce tree had disappeared and was just a part of the warm liquid. Next, a big paddle was put into the kettle and the mixture was beaten until it was smooth and soft.

Then the kettle was opened and the thick mixture began to run down a broad trough and between hot rollers. After a time, the thick liquid was no longer wet and soft, but was changed into huge rolls of stiff white paper. The next day, the rolls of paper were put into a freight car and taken to a printing shop in another city.

After the paper had stood many days in the corner of a big storeroom, more things began to happen. The rolls of paper were cut into large sheets. Some of the sheets had gay pictures printed on them. Others had maps, and many others were covered with little black letters. Then the sheets were folded to the size of pages. The pages were sewed together, and covers and strong bindings were put on. The paper had become the pages of books! Finally, what had been a spruce tree in the forest had become parts of many books on a table in a schoolroom.

Now that the paper had a chance to rest, it wanted to know more about its new friends, the colors, the letters, the linen binding, and the cotton covers of the books.

"I came from a forest in Canada. Where did you come from?" asked the paper.

The colors spoke first. "Our home was inside a mountain in Pennsylvania. We used to be a part of black coal, but men learned how to make us into beautiful colored paints."

"I came from cotton plants on a big plantation in the state of Mississippi," said the cloth cover of one of the books.

"And I was part of some flax plants on a farm in Michigan," said the strip of linen binding on the back of the book.

"The stories we tell come from everywhere," said the little black letters. "Men and women have found these stories in Egypt, Rome, Greece, Germany, England, America, and—well, all the countries of the world."

When the letters were through speaking, everyone was silent. Then the paper spoke again.

"I wonder," it said, "if the boys and girls who read these books will know how many things are needed to make a book and how many different places we come from."

How Paper Is Made

The phrases below, when placed in their right order, will tell the way in which paper is made. In your notebook, write the phrases in their correct order.

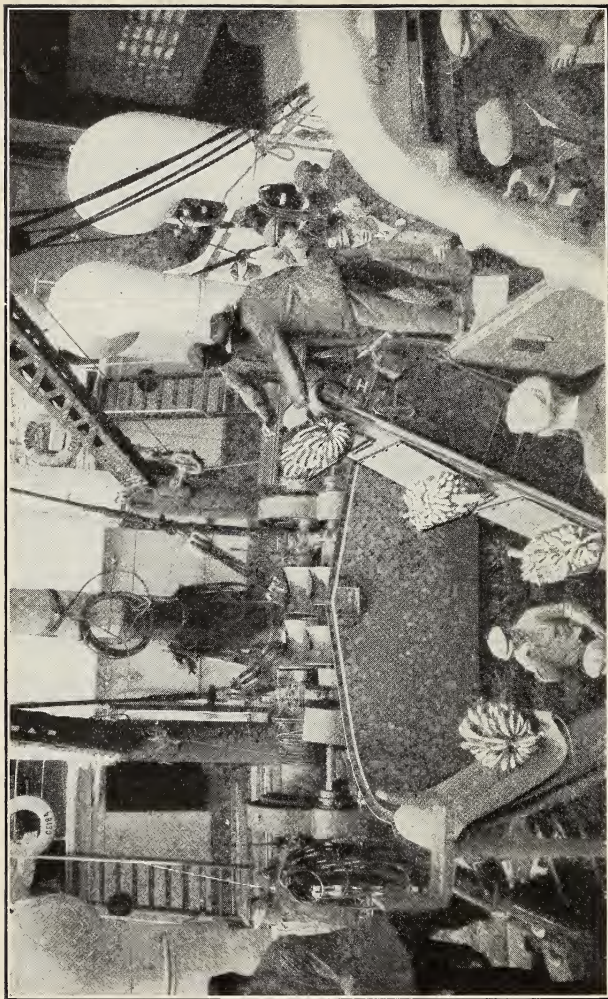
Cooled into stiff white paper
Cut down with axes and a saw
Beaten by paddles into pulp
A spruce tree
Cut to pieces by a machine
Taken to a factory
Floated downstream
Run down a trough and between hot rollers
Boiled in kettles

Drawing Time

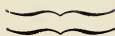
Draw a book for the Bulletin Board or for your notebook and label its five parts and where each comes from.

Using the Map

On a wall map of the world locate the places from which the parts of a book come.



UNLOADING BANANAS. This picture shows part of the work of lifting bananas from the hold of a ship, by machinery. The bananas have come from Central America.



Things Brought from Far Away

"Well," said Philip, when Peter had finished reading the story of the spruce tree, "our books come from everywhere."

"We use other things every day that come from many places in the world," said Jane.

"Can you name some of the things we use and the places from which they come?" asked Miss Tyler.

A number of boys and girls raised their hands. They named cocoa and coffee and tapioca from South America; tea and silk from Japan; rubber and diamonds and gold from Africa; cloth, toys, jewelry, and books from Europe; fruits and nuts from California and Florida; coal from Pennsylvania; shoes from Massachusetts; books and magazines from New York and Boston and Philadelphia; and automobiles from Ohio and Michigan.

"We could name a great many more things and places," said Miss Tyler, "but we must stop now."

"How many places the things we need come from!" exclaimed Grace.

"Primitive men didn't have to send around the world for the things they used," said Fred. "They hunted for their food and made their own clothes."

"But our lives are very different from the lives of primitive men," said Edna. "I shouldn't want to live the way they did."

"One reason we can live the kind of life we do today," said Miss Tyler, "is because we exchange goods and ideas with other people of the world."

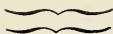
"I should like to read more stories like this one," said Peter. The girls and boys all agreed. They decided to spend a few weeks learning more about exchanging goods and ideas. Should you like to read some of the stories they read, and see some of the pictures they saw? If you would, you will find them in the remaining pages of this book.

Bulletin Board and Notebook

While you study this Unit keep hunting for interesting pictures that show how men have learned to exchange goods and ideas. Put the best on the Bulletin Board and in your notebook.

Map Game

Make labels naming the products mentioned in the story. Pin the labels on a large outline map of the world to show where the products come from.



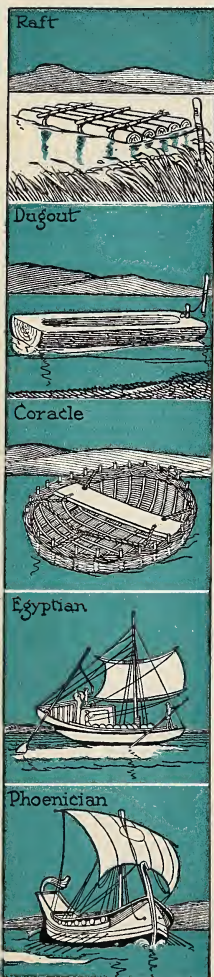
The Story of Ships

One day Miss Tyler pulled down all the shades in the schoolroom and showed the class a set of lantern pictures of boats and ships. Miss Tyler explained each picture. When she was through, her words and the pictures had told the story of ships. Would you like to read the story Miss Tyler told, and see pictures of some of the ships?

* * * *

“For many centuries boats and ships have been used to help men exchange goods and ideas. We think the first boats of all early people must have looked like rafts. A raft was made of logs or branches tied together. In times long, long ago they were tied with rushes. A man stood on the raft to push and steer it with a long pole.

“The next boat we call a dugout. The idea of making a boat out of a log might have come to some primitive man as he watched logs floating down a stream. Perhaps he sat on a log floating in the water one day to see if it would carry him. When he found that it did, perhaps he decided to hollow out the log so that he might carry his bow and arrows without getting them wet.



"The Egyptians were the first people to make pictures of their boats and ships. These pictures we find on vases and in their tombs. Some of the later Egyptian ships had a small deck at the bow and at the stern. The cargo was stored in the center of the ship. Along the sides the oarsmen were seated on short, narrow benches. When the wind was blowing in the right direction a square sail was used. Can you name some of the things that the Egyptian boats carried?

"Look now at the picture of a Phoenician ship. The Phoenicians were the first sailors who dared to sail far out into the sea—the Mediterranean Sea.

"The Greeks also learned how to build ships and how to be good sailors. On the largest Greek ships there were three rows of oarsmen.

The pictures on this page and the next show ten stages in the story of boats and ships. The coracle, third on this page, was an early boat made of rushes. What do you know about modern canoes and rowboats?

After the Greeks learned how to sail they sailed even farther than the Phoenicians. Wherever they went they taught people better ways to live. The Romans modeled their ships after the Greek ones and made them still larger. They built and used many ships.

“Many years later, the Vikings (vī'kīngz) were the bravest seamen of the North and Baltic seas. They were not afraid of the deep sea, and liked to explore new and strange places. In a ship like the one you see here Leif Ericson (ēr'īk-sŭn) crossed the northern part of the Atlantic Ocean and explored some of the coast of North America about the year 1000 A.D.

“Next you see a picture of a Venetian (vē-nē'shăn) ship. In the Middle Ages ships from the city of Venice (vēn'īs) could be seen



Here are seen sailing ships made by five different peoples: one in Ancient Times, two in the Middle Ages, and two in Modern Times. The last ship, the American clipper, was much larger and longer than the others.

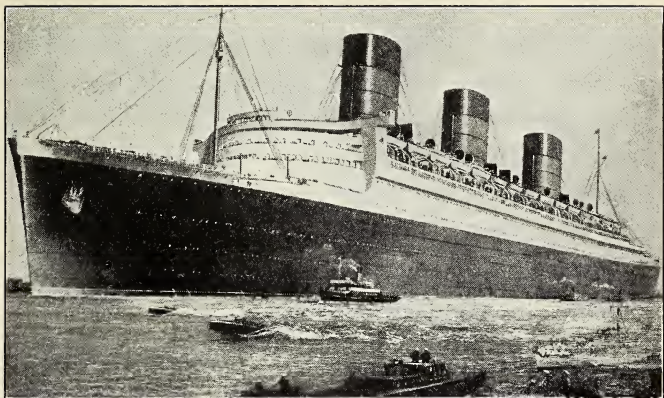
in many of the ports of Europe. The Venetians were great traders, and their ships were filled with grain, precious jewels, and beautiful silk and linen cloth. Their ships needed no oars, but were pushed over the waves by many beautiful sails.

“See next (in the fourth picture on page 391) the kind of ship in which Englishmen sailed and carried on much trade when Queen Elizabeth was ruler of England. With ships like this in 1588 England defeated the Spanish fleet called the *Armada* (är-mā'dā), and became ruler of the seas. Sir Francis Drake, the famous English sea captain, several times sailed to America in ships like this.

“The American clipper ship was a beautiful vessel. Notice (in the last picture on page 391) the sharp bow and the many white sails. American clipper ships were the fastest vessels on the ocean about a hundred years ago. They were seen in nearly every port of the world. Some of them were used to carry people and goods from the Atlantic coast to the gold fields of California in 1849.

“The first seamen used rafts and dugouts. Then men learned to make oars and sails. For hundreds of years men used oars and sails to carry their goods and ideas around the world.

“Finally, a new way of traveling by water was discovered. Robert Fulton, an American, in the



THE QUEEN MARY—the largest steamship ever built before 1937.
It is a British ship.

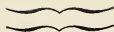
year 1807, proved that a steam engine could be made to do better work than oars and sails. Now nearly all water travel is carried on in steamships. Steamships are larger and stronger than sailing vessels were. They can carry many more people; their cargo can be much heavier; and they travel much faster. It took Columbus two months to come from Spain to America in his sailing vessel. Today, in a steamship, we can cross the Atlantic Ocean in less than five days.

“People laughed at Robert Fulton when he made his steamship, the *Clermont*, in 1807. They thought it very foolish to try to make a ship go upstream without the use of sails!

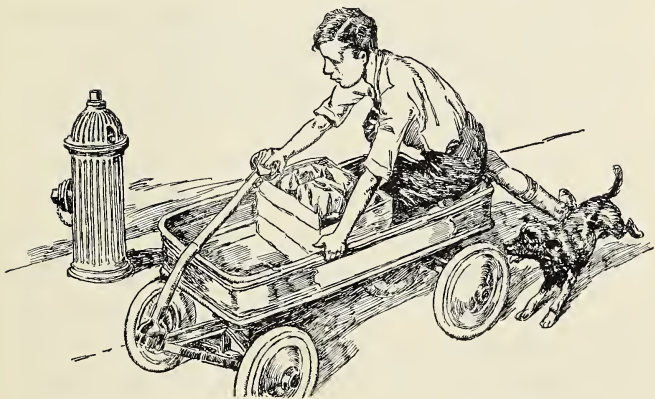
“What do you suppose those people would say today if they could see the big steamships such as the *Bremen*, the *Rex*, the *Normandie*, and the *Queen Mary* traveling across the ocean without sails? These steel ships are strong enough to carry not only heavy steam engines but thousands of people and many tons of cargo. They steam across the oceans exchanging goods and ideas all over the world.”

A Ship Time Line

Make a ship time line. You can use this time line as a picture border for your classroom. Draw a picture of each of the kinds of ships described in the story. Select the best one. Place all the pictures in order.



Wheels! Wheels! Wheels!



Peter is thinking about wheels.

One morning, before going to school, Peter went to the store for his mother. He had a good coaster wagon in which to bring home the groceries. As he coasted along he thought, "My wagon is handy. How quickly these four wheels carry me along. All I have to do is give them a start with one foot and they will carry me twenty feet without any more work."

Just then Peter came to a corner where he had to wait for the traffic lights to tell him when to cross.

As he sat waiting, he seemed to see hundreds of wheels. There were wheels on the streetcars, wheels on the heavy trucks, wheels on the automobiles, and wheels on the bicycles.

"I wonder how the wheel was invented," thought Peter. "Perhaps Miss Tyler can tell me."

When, later, Peter reached school, he said, "Good morning, Miss Tyler. Can you tell me where I can find some stories about wheels? I should like to find out who invented the wheel and when it was invented."

"I'm glad you want to know about wheels," replied Miss Tyler. "The wheel is a very important thing in the world. It does a great deal of the work of exchanging goods and ideas. You might find the answer to your question in one of the history books on the shelf. Perhaps the other boys and girls would like to help you find it."

The boys and girls were eager to take part in such an interesting search. While looking through the first book Peter saw some very interesting pictures of wheels. There was a picture of an old Roman chariot with two huge wheels, drawn by six strong horses. Another picture showed a boat on the Mississippi River with a very large paddle wheel. But the most interesting picture he saw had two parts. On the left of the page was a picture of a number

of Indians carrying heavy loads on their backs. They looked tired. Opposite was a picture of a fast express train. Under the picture were these words:

These Indians are carrying their burdens as all primitive men carried theirs. Today, a fast express train can carry hundreds of tons of goods at the rate of sixty miles an hour.

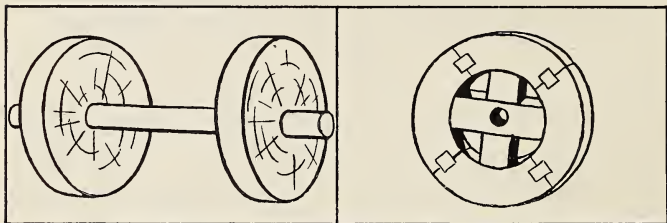
"If the train didn't have wheels," thought Peter, "the steam engine couldn't make it go. If we didn't have wheels we might still be carrying things the way the Indians did."

Just then Joe, who had been looking at another book, said, "Do you know, Peter, we are looking for something that nobody knows? Listen to what I have found in this book:

"Nobody knows just who invented the wheel or when it was invented. It was not invented all at once. Perhaps the first step toward the invention of the wheel was when early men learned to roll heavy loads on logs instead of dragging the loads on the ground. Later, round slices cut from a log were put on the ends of a short, thick pole, and the load was balanced on the pole between the log slices or 'wheels.' These round slices of logs were the first clumsy, heavy wheels.

“To keep the load between the wheels, a little platform was put between them. Later a kind of box was made on the platform. That was the first two-wheeled cart.

“The log wheels were very heavy, and they often cracked and split. To get a stronger and lighter



LOG WHEELS

A STRONGER WHEEL

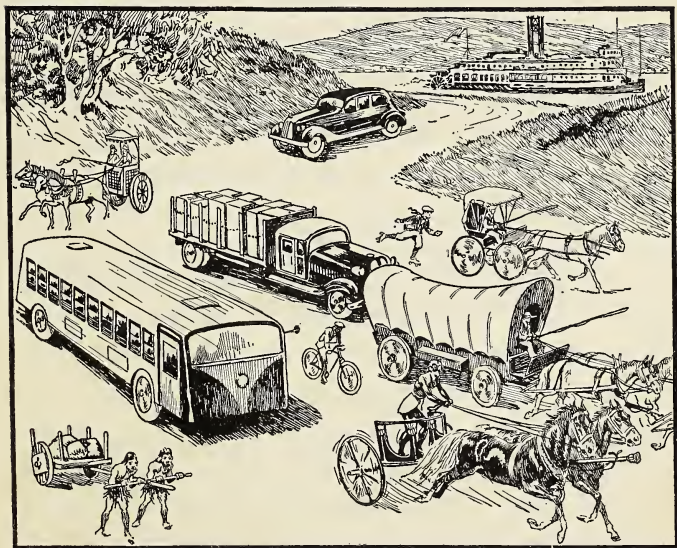
wheel, men found a way to chop curved pieces of wood and fasten them together to make a ring. They fitted crosspieces inside the wooden ring. These crosspieces were the first spokes.

“Gradually men learned to work with wood more skillfully. Lighter and better wheels were made. In the ages when men learned to use bronze and iron, they made wheels out of these metals. But they also kept on making wooden wheels because wood is so light and so easy to cut into the proper shapes.

“Workmen learned to put an iron rim or tire around the outside of the wooden wheel to keep it from wearing out. They also fitted an iron ring in the

center or hub. Then the wheel turned easily on the axle. When men had learned to make strong, heavy wire, many wheels were made with wire spokes. After rubber was invented, people used solid rubber tires on wheels instead of the iron band. Bicycle tires pumped full of air, and 'balloon' tires on automobiles, are very common today.

"People have found wheels so useful that today we have hundreds of different kinds and sizes of wheels. There are small wheels on roller skates,



ELEVEN IMPORTANT USES OF WHEELS

large wheels on trains, and balloon-tired wheels on automobiles and busses.

“Ever since the wheel was invented it has helped men to travel and to exchange goods and ideas. The wheel is one of the greatest inventions the world has ever known. Yet who invented it and when it was invented no one knows.”

Peter did not find out who invented the wheel. He did learn that the wheel is one of the most important inventions men have ever made.

Talking Time

Make believe you are an automobile wheel and tell the story of your ancestors.

Bulletin Board

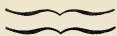
What pictures of wheels have you been able to find for your Bulletin Board?

Reading Time

Look up the story of wheels in the encyclopedia.

Drawing Time

Draw any picture you wish for your notebook, to show your idea of how wheels came to be.



Miss Tyler's Class Talks about Roads

One morning as the boys and girls of Miss Tyler's class came into the schoolroom they were very excited.

"We saw the most interesting thing happen, Miss Tyler," said Peter. "A great big machine went right down Brook Street tearing up the pavement just as a plow digs up the ground!"

"Why are they tearing up Brook Street?" asked Edna.

"Every year more traffic goes over Brook Street," answered Miss Tyler. "It is so busy now that it must be paved with the very strongest kind of material."

"My grandfather told me that when he was a boy, Brook Street was just a path from the barn to the brook on Mr. Evans's farm," said Tom.

"Many of the roads today began as paths," said Miss Tyler. "In early primitive times all roads were just paths. The paths were made by men and animals as they searched for water, salt, and food. Along these early paths men carried their loads on their backs or dragged them on the ground behind them. Every tribe had to find for itself the supplies it needed.

“Later, when tribes began to make pottery and tools and to weave cloth, people began to have things to trade with one another. Market places started near springs, near salt wells, in open places along the rivers, and close to harbors. Along the paths that led to the markets people carried the goods they had to exchange. One could see men with bags of salt, others with rugs and cloth, others with tools or pottery, and still others with grain. The early paths became trading roads.

“In ancient times many of the primitive trading roads had become very important. Farmers, merchants, officers, students, soldiers, and even tourists traveled over them. To make it easier to exchange goods and ideas, some rulers of ancient times tried to make the rough roads smooth and comfortable.”

When Miss Tyler mentioned ancient times Jane remembered the story of Titus, the Roman soldier, that she had heard on History Hill. Jane raised her hand. “The Romans built the best roads of ancient times,” she said, when Miss Tyler called upon her.

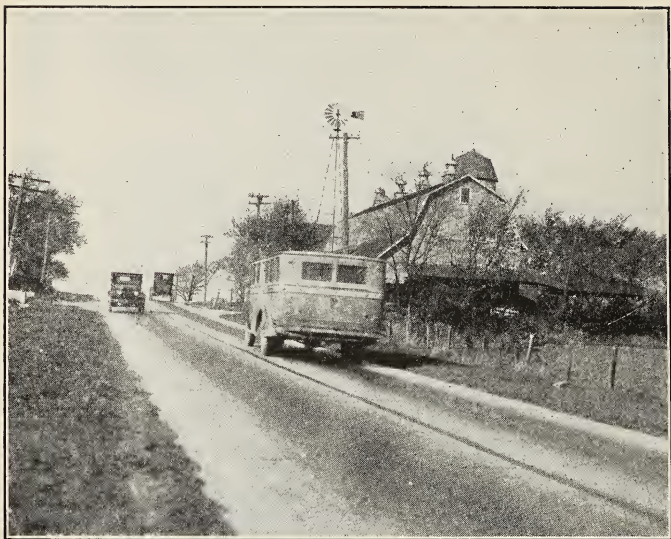
“Yes,” replied Miss Tyler, “Roman roads were the best of the ancient world. They were the safest, and usually the shortest routes from place to place. Over the Roman roads nearly all the land travel of the great Roman Empire passed. There were five great trade routes. Some of the roads on these routes

were paved with stone blocks. Others were paved with crushed rocks and earth. Most of them were so good that chariots could drive over them comfortably with galloping horses."

"I can show you a map of the great Roman trade routes," said Miss Tyler, as she pulled a map down from the map case on the wall. Then she took a pointer and traced the routes. "These black lines stand for the Roman roads. You can see how the Roman roads connected the farthest parts of the Roman Empire with the city of Rome. They tied the whole empire together. Over them, men and beasts and goods and Roman ways of living traveled. People who came to Rome carried away with them Roman ways of doing things. Romans who visited in faraway places returned with new goods and ideas."

"When the Teutons conquered Rome they did not take good care of the Roman roads," said Peter. He remembered the story of Charles, the Teuton, that he had heard on History Hill.

"Yes," replied Miss Tyler. "For many years after the Teutons conquered Rome, the roads of Europe were very bad, and trading almost stopped. After many years the Teutons wanted more and better things. They wanted spices from India, silks from Japan, and dishes from China. Of course, boats could bring these things to the harbors. But roads



A MODERN, WELL-BUILT ROAD in a part of Pennsylvania where there are many farms.

were needed to carry the goods from the harbors to the other parts of the country. So the Teutons began to repair the old Roman roads and to build new ones."

"We need roads today as much as the Teutons did," said Louis, "—because the things we use come from many different places."

"If we did not have roads, we could not live as we do," said Miss Tyler.

"We need good roads, too," said Tom, "for automobiles and trucks can not travel over bad ones."



Ashel Curtis

A MODERN, WELL-BUILT ROAD in one of the mountainous parts of the state of Washington.

"I can see now why they are tearing up Brook Street," said Edna. "We must keep our roads mended and strong all the time, because they help us to exchange goods and ideas."

Writing Time

Write a summary of the story of roads.

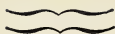
Explaining Time

Tell the class why the following statement is true:

Good roads are necessary for the rapid exchange of goods and ideas.

Using Automobile Maps

Bring to school automobile maps of your city, your state, and the United States. Trace on the maps trips that you would like to take.



How Transportation Helps

Since primitive times people have tried to exchange goods and ideas with one another. The ideas we have, come to us from many places. The things we eat, the furniture we use, and the clothes we wear, come to us from many parts of the earth.

Transportation, or good ways of carrying people and things, helps people to exchange goods and ideas. The invention of boats and the use of wheels have made it easier to exchange things. Good roads help, too. Boats, wheels, and roads are of very great help to us in exchanging goods and ideas.



Transportation by the use of boats, wheels, and roads. How do the things carried by the boat, trains, and truck help to make your ways of living?

Reading Time and Talking Time

Adams, Peter, *Cork Ships and How to Make Them*.
Carpenter, Frances, *The Ways We Travel*.

Curtis, Nell C., *Boats; Adventures in Boat Making*.

Dukelow, J. H., and Webster, H. H., *The Ship Book*.

Hader, Berta, and Hader, Elmer, *The Picture Book of Travel*.

Petersham, Maud, and Petersham, Miska, *The Story Book of Ships*, and *The Story Book of Transportation*.

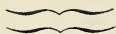
Unit Study Books, No. 303: *The Story of Boats*.

Walden, Arthur T., *Harness and Pack*.

You will enjoy reading and telling stories about boats. On pages 77-81 of Lansing's *Man's Long Climb*, there is a story of an Egyptian boy, "Bek, the Boat Builder." On pages 166-186 of *Stories of Useful Inventions*, S. E. Forman tells the story of boats from the earliest dugouts to steamboats. In Frances M. Perry's *Four American Inventors* there is the story of Fulton's *Clermont* on pages 46-63. There is an interesting pageant called "Ships" on pages 185-203 of Carpenter's *The Ways We Travel*.

On pages 91-109 of *Man's Long Climb* Marion F. Lansing tells stories of several ways man has learned to make and use wheels. On page 108 she tells "The Story of the Wheel in Picture." S. E. Forman, on pages 146-152 of *Stories of Useful Inventions*, tells of man's use of the wheel in carrying goods and people.

You can find much about the making of roads on pages 163-184 of Carpenter's *The Ways We Travel*.



The Story of Writing

Do you know that there was a time when men did not know how to write? In those days, if the chief of a tribe wanted to send a message he told it to a messenger. The messenger had to learn it by heart. Or, if the chief wanted to remember something that had happened, he told it to one of his *memory men*. The memory men learned by heart all the important things that happened to their tribe. When they grew old, they taught all they remembered to younger men, and these men, when they grew old, taught it to others, and so on. In this way the stories of the tribe were handed down year after year.

Have you ever tied a string on your finger to help you to remember something? Memory men finally learned that they could do things that would help them to remember. Messengers cut notches into sticks which they carried to help them remember the messages they were bearing. Among the Indians of Peru, the memory men tied knots in cords of various colors to help them. These men were called the *officers of the knots*. The collection of knotted cords was called a *quipu* (kē'pōō). The quipu was a record of all the things that happened to the tribe.

The things that people invented to help them remember are called *memory aids*. Memory aids were really the first kind of writing.

The next step in the story of writing is called *picture writing*. All over the world, wherever people lived long ago, we find pictures carved on pillars of stone, on huge rocks, and on the walls of caves. When people learned to draw pictures, it was easier for them to tell their stories or to send messages.

In the days of picture writing, if the chief of a tribe wanted to send a message he might draw it on a piece of skin or block of clay. The man who received the message might read something like this:



The picture of the chief stood for "I." The man holding out his two empty hands stood for "want." The picture of the two oxen, of course, stood for "two oxen." The message, you see, was "I want two oxen."

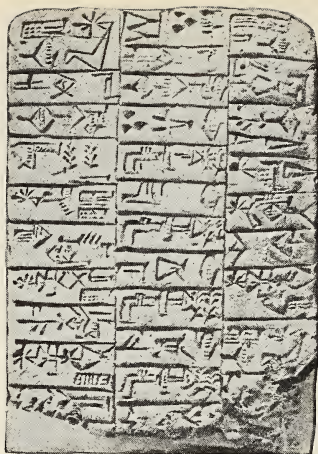
Picture writing was very much better than memory aids, but it took very long to draw the pictures. After a while people learned to make signs which stood for the pictures. Instead of a whole man,

a head stood for "I." One hand instead of two stood for "want." Only the heads of oxen were drawn instead of their whole bodies. These we call *picture signs*. Picture signs are drawings which stand for ideas. How long do you think it would take you to write your spelling lesson if you had to draw picture signs instead of writing letters?

Someone—we do not know who—finally decided that picture signs, like picture writing, took too much time and space. This someone lived near the Red Sea on the Sinai (sī'nī) peninsula about four or five thousand years ago. Perhaps he was a busy workman who had to keep records for his chief. This workman learned to make twenty-two very small signs with which he could do all of his writing. Today we call these very small signs *letters*. Making letters is a great aid to writing.

The Phoenicians, who traded with the people of Sinai, were glad to learn this easy kind of writing. The Phoenicians were busy traders and had to have the very best way of writing to keep their records. So they took these twenty-two letters back to Phoenicia and taught their people how to use them.

When the workman in Sinai invented them, he did not know that these twenty-two letters were going to take a very long journey. The Phoenicians took them to the Greeks, who called the letters the



Science Service

EARLY WRITING. The two carved stones at the top of the page are from ancient Babylonia and ancient Egypt. At the right is some Chinese writing (read from right to left), with the same sounds shown in our modern script. At the foot of the page is some early Latin writing.

子甲 ¹	戌甲 ¹¹	申甲 ²¹
<i>kiā cū</i>	<i>kiā sio</i>	<i>kiū xīn</i>
丑乙 ²	亥乙 ¹²	酉乙 ²²
<i>yě chiu</i>	<i>yě hai</i>	<i>yě yiu</i>
寅丙 ³	子丙 ¹³	戌丙 ²³
<i>pīng yñ</i>	<i>pīng cū</i>	<i>pīng sio</i>
卯丁 ⁴	丑丁 ¹⁴	亥丁 ²⁴
<i>tīng mào</i>	<i>tīng chiu</i>	<i>tīng hai</i>



alphabet. The Greeks took them to the Romans. The Romans took them over the southern half of Europe and to Britain. The Greeks, the Romans, and the Britons made some changes in the letters. Finally, many years later, when the first white settlers came to America, they brought the alphabet with them. Today people in nearly all the countries of the world know how to use these letters.

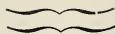
Before letters were invented, people had to depend upon memory men, memory aids, picture writing, or picture signs. It was very difficult for people to send messages to one another and for merchants and officials to keep records. Of course, people could not have the kind of books they have today. But using an alphabet in writing makes it easier for men everywhere to exchange goods and ideas.

Make a List

Can you make a list of the steps in writing?

Picture Writing

Write a sentence in picture writing. See if the class can tell what you meant to say.



Beaver Skins or Dollars

A few years ago, a French singer sang at a concert given on an island in the Pacific Ocean. In exchange for her songs, what do you suppose she received? She received three pigs, twenty-three turkeys, forty-four chickens, five thousand coconuts, and a great many bananas, pineapples, and oranges. Coins were very scarce in these islands and people had to pay for the concert with whatever things they had. The singer had traded her songs for the things the island people had to give.

Before money was invented, everyone bought and sold his goods just as these natives did. For instance, if a man wanted grain, he would look through the things he owned to see what he could give in exchange for the grain. Perhaps he would decide upon a sheep. Before he could get his grain he would have to find a man who had grain to trade and who wanted a sheep. If a potter wanted a fish for dinner, he might exchange a small vase for a fish. This kind of trading we call *barter*.

Barter was all right for the very early people who raised, made, or hunted nearly everything that they needed. But as time went on, people found it was a

troublesome way of trading. Suppose the fisherman did not want the little vase that he had taken for the fish? He would have to find someone who did want it and who could give him something he needed in exchange.

A hunter who wanted to trade a deer for the things he needed could cut the deer meat into pieces. One piece he might exchange for more arrows; another, for grain; and another, for fish. What would happen, though, if a weaver made a rug and wanted to exchange it for food? He could not cut up the rug as the hunter cut up his deer, for then the rug would lose its value.

The worst trouble people found with bartering was to decide how much of one thing to give for another. For instance, if a man had beef and wanted grain, how

The pictures here show bartering at various times and places: the first in ancient times; second, in colonial times in America; third, fourth, fifth, in later times.



much beef should he give for the grain? Or if he had grain and wanted a beaver skin, how much grain should he give for the beaver skin?

People finally found that it would be better to use one article as money. At one time beaver skins were used as money in northern lands. A sheep might be worth two beaver skins, and a cow might be worth five. Sheep and cows, too, have been used as money. Twelve bushels of wheat might be worth one cow. The North American Indians used wampum beads as their money. Ivory, olive oil, tobacco, eggs, and codfish have all been used at different times and places as money.

What would you think if, when you bought some new clothes, your mother gave the merchant beaver skins or tobacco instead of dollars?

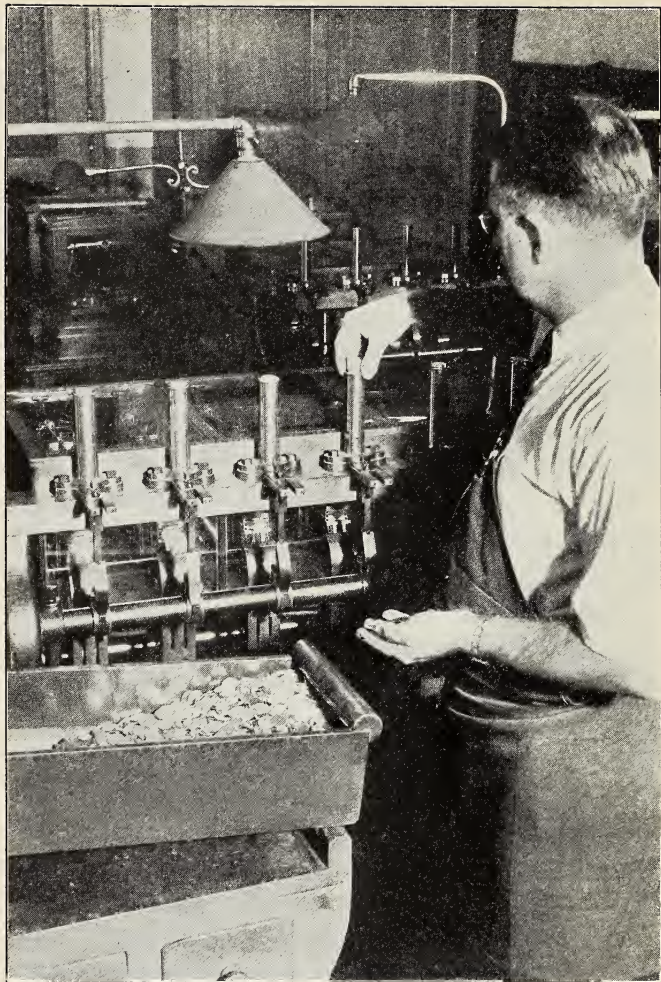
After men had tried to use beaver skins, eggs, and other things for money, they decided, just as you would, that they must have something better. They needed something that was worth the same to everyone, something that would not spoil, that could be carried easily, and that could be divided. They tried many things in their search for good money. They used glass, leather, paper, iron, nickel, copper, silver, and gold. Finally, they decided that the metals copper, nickel, silver, and gold make the best money. When used as money, one of these metals

has the same value for everyone. It does not spoil, it can be carried around easily, and it can be divided.

The first metal money was not made into coins. Rings or bars of silver, copper, and gold were used. But metal coins were made, and came into use, in ancient times. The Chinese were using them more than three thousand years ago. Later, coins were much used by the people of Japan and India, and by the Egyptians, the Greeks, the Romans, and the Britons. Today, every civilized country of the world has its own kind of metal coins. Most of these coins are made of gold, silver, nickel, or copper.

The governments of the world make the money for their people. No one else is allowed to make money. The buildings in which money is coined are called *mints*. There are about seventy mints in the world today. The United States has three of them. The first one in the United States was opened in Philadelphia in 1792. Since then mints have been opened in San Francisco and in Denver.

If you examine the different coins made by the United States, you will understand something of the work that must be done in the mint. Every coin must weigh a certain amount. Each coin must have a design upon it. This design must tell us what kind of coin it is and to what country it belongs. When coins were first made, different shapes were used.



Harris & Ewing

IN A UNITED STATES MINT—part of a machine for stamping the designs on coins.

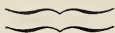
Today, nearly every country makes round coins. Each country tries to make its coins as beautiful as possible. The pictures on the coins always stand for something of interest in the country to which they belong. Can you name all of the coins made in the United States, and tell the meaning of the pictures on them?

Our government also makes several kinds of paper money. Each piece of it tells how much it is worth. The governments of nearly all countries make paper money as well as coins. Paper money has generally been as good as metal money, because governments will usually exchange metal money for it.

Have you ever gone to town to shop with your mother? If you have, you know how hard it is to pick your way through the crowds of busy shoppers. But what if all the shoppers had to carry beaver skins or bags of tobacco instead of money?

Writing a Letter

Imagine you are a dollar. Write a letter telling how you help people to exchange goods and ideas. Choose the best letter for your class Bulletin Board.



More Helpers

After the class had read "The Story of Writing" and "Beaver Skins or Dollars," Miss Tyler asked each pupil to write a sentence telling one way in which writing and money help men. Jane's sentence was so good that Miss Tyler copied it on the black-board. It read:

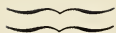
Writing and money make it easier for men to exchange goods and ideas.

Explaining Time

Explain to the class why it is true that "Writing and money make it easier for men to exchange goods and ideas."



A beaver skin offered in trade,



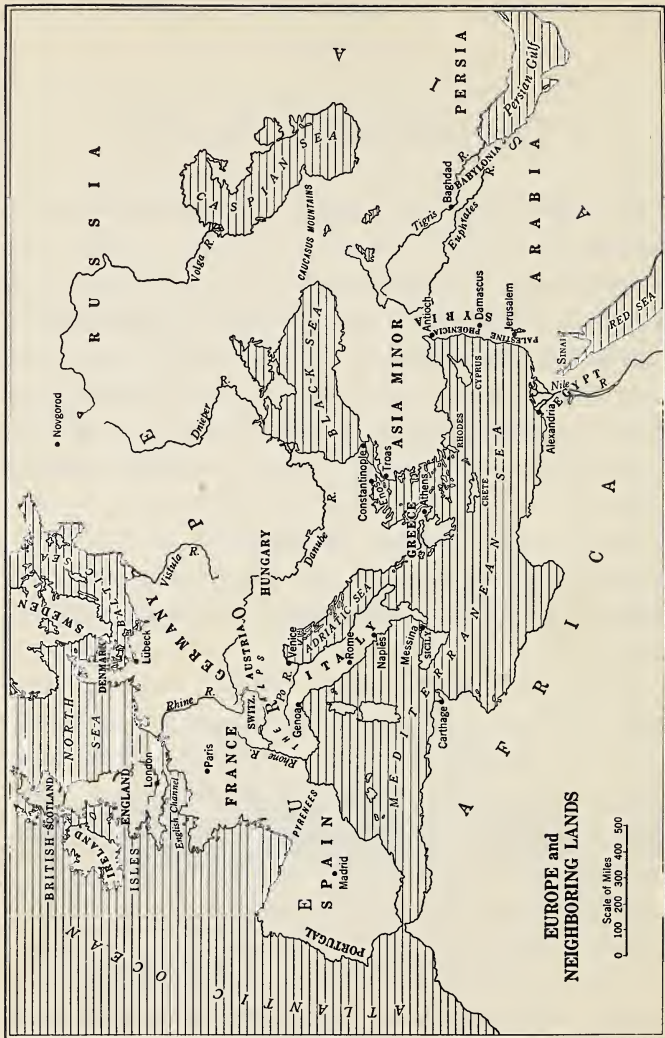
The Phoenician Traders

“The Phoenicians are coming! The Phoenicians are coming!”

Quickly the message spread over the little Greek village of Enos (ē'nōs) on the shore of the Mediterranean Sea, one day nearly three thousand years ago. Everyone who had anything to trade hurried with it to the beach. No one wanted to miss the visit of the Phoenician traders. Closer and closer came the ship with its huge red and purple square sail. At last it was so close that the Greeks could see the black-bearded sailors. Finally, one end of the ship was dragged up on the beach, and the villagers gathered around it.

What did the Phoenician traders have in their ship this time? The people did not have to wait long to know. Soon the traders were offering them beautiful purple robes, warm woolen garments, ivory combs, alabaster jars, and copper and silver dishes. In exchange for the goods the Phoenicians brought, the Greeks gave the Phoenicians bars of silver and copper, and jars of wine and grain.

The Phoenician traders were always welcome visitors in the village of Enos. No other traders brought



such fine goods or so much news to the little town. When the trading was over, the villagers prepared a feast for the traders. While the Phoenicians were eating and resting, the villagers asked them many questions. They liked to hear the traders tell about the lands they had visited and about their own homeland, Phoenicia.

The homeland of the Phoenicians was a small strip of land along the eastern coast of the Mediterranean Sea. We do not know just when the first people settled in Phoenicia, but we do know that by the year 1000 B.C. the Phoenicians were the greatest sailors and traders of all the peoples then living on the Mediterranean Sea.

In those days people knew very little about the sea. They had no compass. There were no geographies to tell them what the ocean, shores, and islands were like. The sailors imagined strange things about the sea. Most people were afraid to go far from shore.

The Phoenicians were not afraid of the sea, but at first their only boats were rafts and dugouts. In such boats they could not go very far. The Egyptians had large boats which they sailed up and down the Nile River. Sometimes, the Egyptians even dared to sail some distance along the coast of the Mediterranean Sea, and also in the Red Sea. When the Phoenician sailors saw the ships of the Egyptians, they

learned how to make bigger ships for themselves. Then they began to go on voyages all around the Mediterranean Sea.

The Phoenicians were fearless sailors and traveled to places where no one else had dared to go. Soon their ships could be seen everywhere in the Mediterranean Sea. They even dared to go out into the Atlantic Ocean as far north as the British Isles. Some of them went far along the coast of Africa, and through the Red Sea and along the coast of Asia to India. They started many towns and cities around the Mediterranean Sea. Although their little homeland never grew to be very large, there were many Phoenician towns along the Mediterranean coast. The largest of these was the city of Carthage, in North Africa.

When the Phoenicians began to explore, they found people living on all the shores of the Mediterranean Sea and on many of the islands. You can imagine how strange the Phoenicians looked to these other people when they appeared in their strong ships with their many oarsmen and square sails. At first the people were afraid that the Phoenicians had come to fight with them and to try to rule over them. They soon learned, however, that the Phoenicians did not want to fight. Instead, the ships of the Phoenicians were filled with useful and beautiful things which the sailors wanted to trade.



PHOENICIAN TRADERS of early times. What two kinds of power were used to drive their ships from port to port?

The Phoenician traders learned many new ideas in their travels. They did not keep these new ideas to themselves alone. As they went from place to place, they told the ideas to others. They taught people how to be good silversmiths and goldsmiths, how to make useful articles out of copper and glass, and how to dye linen and woolen cloth. They taught the people how to use an alphabet for writing, how to build ships, and how to be good sailors.

Instead of fearing them, people were glad to see the ships of the Phoenician traders. Everywhere they went they were welcomed just as they were in the little village of Enos.

The people of Enos listened to every word the traders spoke. They liked to hear how the Phoenicians got purple dye from little shellfish—a dye with which to color cloth. They liked to hear stories of the caravans that brought spices and perfumes from Arabia. They never grew tired of the stories of the great cedar trees of Lebanon (lěb'á-nŏn) in the land of the Phoenicians, and of the wonderful cities of the East.

How quickly the hours passed when the Phoenician traders visited the village of Enos! All too soon the feast was over. The traders loaded their ship again. When they were ready, they pushed it off the beach and unfurled the sail. Men pulled the oars and the

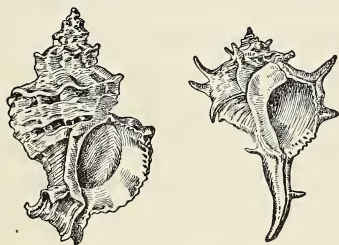
winds filled the sail. The villagers of Enos waved good-by. Then they turned to look again at the new things the Phoenician traders had brought them.

Give a Play

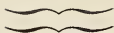
Give a play about the Phoenicians' visit to Enos. Show how the traders exchanged ideas and goods with the Greeks.

Using the Map

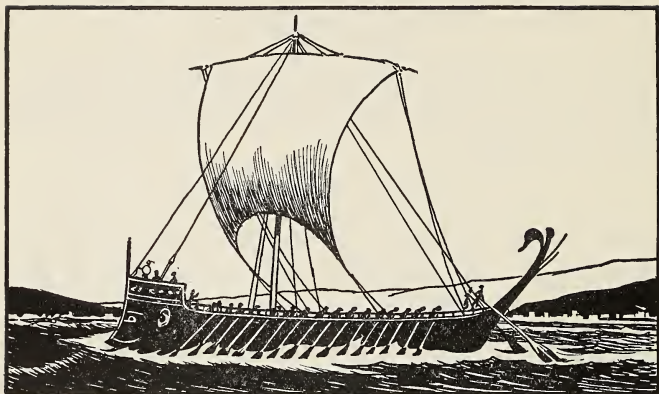
On the map on page 422 trace the journeys of the Phoenicians. Find the place where the Phoenicians discovered the alphabet.



Shells of the shellfish from which the Phoenicians made a purple dye.



Craton's Visit to Athens



A GREEK SHIP like the one used by Siton.

One spring day in the year 450 B.C., Craton (krā'tōn) and his father, Siton (sī'tōn), were on a ship going to Athens. The city of Athens was the pride of the Greeks. In the spring the festival of the Greek god Dionysus (dī-ō-nī'sŭs) was always celebrated in Athens. Many people came to visit the city during the festival. Merchants and traders from all over the ancient world came to exchange their wares. Siton was a farmer and had a fine crop of wheat which he hoped to sell during the festival week.

Craton enjoyed the journey to Athens from his home at Chalkis (käl'kīs), on an island not far away. He liked to watch the sailors move the huge square sail and to see the oarsmen pull together on their big oars. Best of all, he liked to sit near his father as he talked with the other men who were on their way to Athens.

Athens was built on a high plain between two rivers. It was surrounded on three sides by mountains. The fourth side sloped down to the sea. A very strong wall ran all around the city and down to the port. The part of the city near the sea was called Piraeus (pī-rē'ūs). It had very good harbors. The boat on which Craton and his father were sailing was bound for a harbor in Piraeus.

The next morning Craton was wakened early by his father. "We are coming close to shore, Craton. Come, look at the city before we go into the harbor."

Craton did not have to be called twice. He soon joined his father and the rest of the people who were looking up at the city on the hill. The beautiful white marble buildings stood out brightly against the blue sky in the morning sunshine. Craton had never seen anything so beautiful before.

"If you keep your eyes and ears open, you will learn many new ideas in beautiful Athens," said his father.

Soon the boat was made fast and the passengers began to climb out on the landing. "We shall spend some time at the port before we go up the hill," said Siton. "Before we leave the wharf, let us look at the harbor. See those sheds along the north shore? That is where many of the Greek ships are built. Look at the men unloading that ship. They are taking off wheat for the city of Athens. That is the way my jars of wheat are handled when they arrive in port. But come, I want to find the wharf where the wheat of Minto of Troas (trō'ās) is landed. They tell me he has a special way of packing wheat which is very good."

Finally, Craton and Siton were climbing up the hill. They were to stay at the home of a man who was Siton's friend. When they entered the gate of the city on the hill, Siton said, "This part of Athens is older than Piraeus. That is why the streets are narrow and winding and the houses small and crowded together. The very oldest part of the city is on that high hill."

"I know what that is called!" cried Craton. "That is the Acropolis (ă-kröp'ō-līs). It was the fort of Athens in olden times. Today the very finest buildings of Athens are there."

"You are right," replied his father. "We go this way, for my friend lives near the agora (ăg'ō-ră)."

*R. Rafter, N. Y.*

THE ACROPOLIS of Athens as it looks now. Compare the ruins of the Parthenon, at the top, with the picture on page 23.

In Athens, as in all Greek cities, the market place was called the agora. In the agora, merchants and craftsmen had their stands where they sold their wares. The agora, however, was more than a market place. Around it stood the public buildings of Athens. Every day many of the citizens of Athens

met there to talk and to carry on the work of the city. With so much going on, the agora was the busiest place in all Athens.

Busy days followed for Craton, for wherever Siton went he took Craton with him. They went up on the Acropolis to see the Parthenon (page 23). They went to the festival programs that were held in the theater of Dionysus. They spent many hours at the agora. Craton followed his father in and out of the shops of the goldsmiths and silversmiths and the copper and iron traders. He watched the glass blowers make the crystal vases which his mother liked so much. He watched weavers make beautiful linen cloth, sculptors carve statues of men and women from pure white marble, and potters at work with their clay. Sometimes, when Siton was busy, Craton played near the fountains with the boys there.

After Siton had sold his wheat he bought new jars for wheat, a strip of fine linen for Craton's mother, and a pretty black and red vase for Craton's sister. When Siton asked Craton what he would like to take home from Athens for himself, the boy replied quickly, "A knife to carve with."

"A knife to carve with?" asked his father. "What do you know about carving?"

"Yesterday," replied Craton, "when I was at the fountain I met a boy from Messina (mēs-sē'ná).

He was making a bird cage out of wood. He let me hold his knife and showed me how to carve. I should like to make a bird cage just like his."

"Then you learned something new in Athens, didn't you?" said his father.

"Oh, I learned many new things in Athens!" exclaimed Craton.

"Everyone who goes to Athens should learn many new ideas," said Siton. "A city like Athens, where people from all over the world are found, is the best place to exchange goods and ideas. I learned from Minto of Troas a very good new way to pack wheat."

All too soon the visit to Athens was over and Craton and his father were on the ship going home. As Craton lay on the deck and sunned himself, he thought of the many new things he had seen and learned in Athens.

Learning About Athens

How does Athens look today? From your geography book find out more about this city. Is the port of Athens as busy as it was in ancient times?

Find pictures of the things that are bought and sold in Athens, for your Bulletin Board.



How the Romans Helped the Britons

When the Romans became rulers of the ancient world about two thousand years ago, their merchants traded in all the ports they could find. They even went as far as the British Isles off the northwest coast of Europe. In those days the British Isles were called the Tin Islands because there the Phoenician and Greek traders were able to exchange their wares for tin stone. The Phoenicians and Greeks traded with only a few people along the southern coast of the largest island, which they called Britain. But the Romans were not content to trade only along the southern coast. They sent soldiers and traders all over the part of Britain that is now England.

The Romans found the land wild and primitive. There were no roads in Britain. There were only forest paths. The people were divided into many tribes who were often fighting with one another. The soil was good, but the Britons did not know how to farm very well. Here and there, in open spaces of the forests, the Romans found the Britons living in little villages.

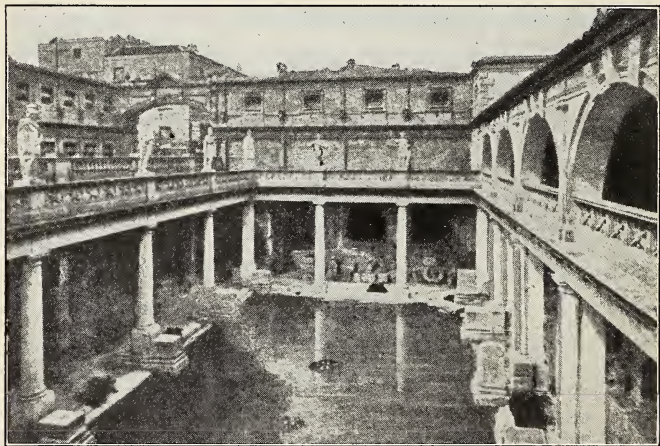
The houses the Britons lived in were uncomfortable. They were very small, with only one room.

The floor was hard earth and the windows were only holes in the walls. When it rained or was cold the holes were covered with skins of wild animals. When it was dark the only light they had came from the open fire. All of their food had to be cooked over the fire, and they did not know how to cook it well. The only furniture in the house was a rough table and a few stools. They had no beds, but slept on the skins of animals spread on the floor.

When Roman officers and merchants came to live in Britain, they did not want to live as the Britons did. The Romans wanted to have as comfortable homes in Britain as they had had in Rome. They brought with them furniture and clothing, and all the better ways of living they knew about. They built beautiful Roman houses, theaters, stadiums, and public bath houses.

The Romans put men to work building roads, cutting down trees, planting grain, and digging for tin stone and iron ore. They taught the Britons how to work together. Then the Britons began to have better farms and mines. The new roads were filled with busy people carrying their wares to the markets. The seaports were filled with the vessels of merchants from many parts of the Mediterranean lands.

With more things to trade, the Britons began to grow richer than they had been before. As they



ROMAN BUILDINGS IN BRITAIN—a market and a fine bath house.
Notice the columns and the arches.

grew richer they stopped living in little huts. Instead, they learned from the Romans how to build comfortable houses. Later on they began to use the goods and ideas brought to Britain from all over the world then known. The houses of wealthy Britons began to look like the house of Julius, the wealthy Roman.

As the years went by, Britain changed from a land of forests to a land of farms and mines. Good roads took the place of forest paths. Rude villages changed into fine towns. The people in Britain had learned better ways of living by exchanging goods and ideas with the Romans and the other traders of the ancient world.

Writing a Letter

Imagine you are a Roman merchant who went to Britain. Write a letter home to Rome telling what you saw there.

Using the Map

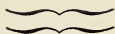
On the map on page 422 trace the journey of a ship from Rome to Britain. Describe the ship and tell what kind of goods it was carrying and who some of the passengers were.

Talking Time

What lessons about good living and working together does this story teach us?



IN A CITY OF THE LATE MIDDLE AGES, when many people were beginning to carry on trade.



How Trading Almost Stopped and Then Began Again in Europe

In ancient times, many people had comfortable ways of living because people had learned how to make things and to trade with one another. As we have seen, in Greece and Rome and other countries of ancient times people learned a great deal by exchanging goods and ideas.

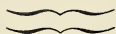
But, as you know, ancient countries became weak. The Roman Empire was finally conquered by the fierce Teutons from the dark forests of northern Europe. Then many of the good ways of living were destroyed and forgotten. Roman soldiers no longer protected the Britons or the other people of the Roman Empire. Traders were often robbed.

For many, many years after the Teutons had conquered most of Europe, very little trading was carried on. People lived on small manors or in tightly-walled towns, and did not often dare to go far from home. Many of the comforts of older times were forgotten, and ways of living were not very pleasant anywhere in Europe.

Then, toward the end of the Middle Ages, as this time is called, people began to exchange goods and

ideas again. Cities began to grow larger and busier. In southern Europe cities such as Venice became great trading centers. In northern Europe a number of cities called the Hansa towns became centers of trade. By the time of Columbus, many European cities were carrying on trade with other parts of the world. The trade these cities of Europe started still goes on today, and helps to make our ways of living more comfortable.

The stories that you are going to read next tell of the trade of the European cities at the end of the Middle Ages. One story tells of Venetian ships and traders on the Mediterranean Sea. One story tells about a merchant in the city of Lübeck in northern Germany. Another tells about early voyages across the Atlantic and other oceans. Miss Tyler's class liked these stories very much. Will you?



Boats among the Islands of Venice

“Oh, Lorenzo! Come! The fleet from Constantinople (kǒn-stăn-tĩ-nō’p’l) is in!”

Marco did not have to shout a second time to his cousin. In a flash Lorenzo was down the stone stairs of his house. Soon Marco and Lorenzo were running through the narrow streets of Venice. Through the Square of St. Mark, and past the beautiful cathedral, they ran. Soon they were where the fleet of ships from Constantinople was tied to the wharves.

Five or six hundred years ago boys and girls in Venice were usually not excited when ships came in. They saw many ships coming and going among the islands of Venice all the time. They would look at ships just about as you look at trucks or freight cars today. Lorenzo and Marco were running so fast and excitedly this time because Lorenzo’s father was coming home from a long voyage to Constantinople.

While the boys were waiting for Lorenzo’s father, they enjoyed watching the workers unload the ships of the fleet. They saw bales of cotton that had been brought to Constantinople from Persia, Egypt, and northern India. They saw sugar from Cyprus (sĩ’prűs),

pearls from the waters of the Persian Gulf, fine flax from Egypt. There were silks and gold brocades from China and Persia, beautiful soft rugs from Baghdad (bâg-dâd'), and many other things that the merchants had bought in the markets of Constantinople.

Venice, where Marco and Lorenzo lived, is a beautiful city built on islands at the head of the Adriatic (â-dri-ăt'ic) Sea. The Adriatic Sea is east of Italy. When the Teutons came into northern Italy at the end of ancient times, some of the people from the mainland of Italy fled to these islands. There they were safer than they had been on the mainland.

Slowly the city of Venice grew. The people on the islands had to go in boats to the mainland to trade for food and many things they needed. As the years went by, they began to trade farther and farther from home. Finally, the merchants of Venice liked to trade with Constantinople and other cities near the eastern end of the Mediterranean Sea.

It is no wonder that the traders and merchants of Venice liked to go to such places as Constantinople. To Constantinople came goods from India, China, and many other places far to the east. Constantinople was a city of beautiful churches and palaces and busy markets. To the markets came traders and merchants from Syria, from Egypt, from Palestine,



TRADERS IN VENICE in the Middle Ages.

from Russia and Hungary, and from other parts of western Asia and eastern Europe.

In such busy places as the markets of Constantinople you may be sure the traders and merchants from Venice learned many new ideas. They soon learned to like the beautiful rugs and tapestries and silks and the delicious spices and fruits they found there. They found that the people in this part of the world had better manners than did the people of western Europe. They carried home with them all the new ideas they learned.

Venice was not the only city that carried on good trade with the places near the eastern end of the Mediterranean Sea. Genoa, Naples (nā'p'lz), and many other cities became wealthy from trading and learning to make things.

As the merchants of Venice became rich from trade, they built more beautiful churches and homes and public buildings. They copied many ideas about building from Constantinople. They rebuilt their most famous church, the Cathedral of St. Mark, to look like the beautiful churches of Constantinople. They learned to make colorful mosaics, jewelry, and glassware such as they had first seen in the markets of Constantinople and carried back to Venice.

What did the merchants and traders of Venice have to exchange for the beautiful things of the East?

Fleets of Venetian ships went to England, Germany, Sweden, and Russia for iron, copper, tin, fish, wool, and furs. The ships carried spices and cottons and silk to northern Europe to exchange for the things they got there. Year after year there was more trade. By the year 1400 there was more exchanging of goods and ideas than there had been since the peaceful days of the Romans. People all over Europe were wanting more and more things and making their ways of living better and better.

When Lorenzo's father had finished his work on shipboard he came out on the wharf. "I'm so glad you have come home at last, Father!" cried Lorenzo as he ran into his father's arms.

"I am glad to be in Venice again, son," said his father. "Here is our gondola. Let us hurry home to your mother and sisters."

Soon the father and the boys were being rowed along the canals of Venice, past the large warehouses, the busy shipyards, and the beautiful palaces and buildings. Lorenzo's father smiled happily as he looked again on his beloved Venice. "Constantinople may be bigger and older and more beautiful than Venice," he said, "but Venice, too, is becoming very beautiful. How comfortable our ways of living are! It is because we trade with other people that we live as we do today."



Courtesy Italian Tourist Information

GONDOLAS in Venice in recent times.

Drawing Time

Draw a picture of Lorenzo and his father.

Using the Map

Trace the journey of the ships of the Venetian merchants who traded with the merchants of the East at Constantinople.

Learning More About Venice

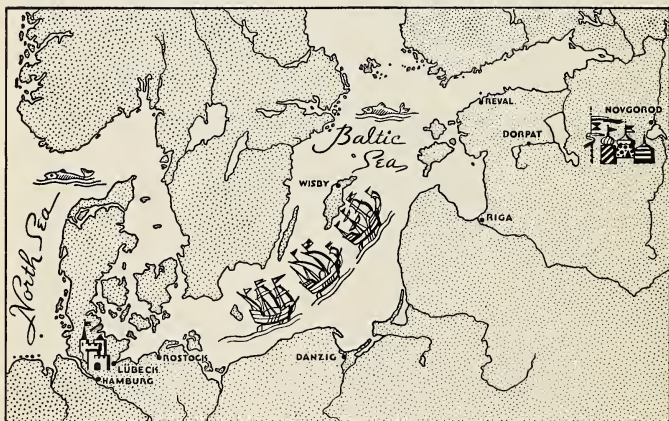
Have you seen any pictures of the beautiful buildings of Venice? If so, show them to the class and place them on the Bulletin Board.

A Question for Discussion

Would you think that Lorenzo's ways of living were as comfortable as your own? Why?

Hans von Zuhlens, Merchant of Lübeck

Elsbett's father, Hans von Zuhlens (häns fôn tsōō'lěns), was a rich merchant of the city of Lübeck, about the middle of the fifteenth century. His ships lay at the wharf outside of the city, filled with goods. He and four other merchants were ready to start the long journey to the market of Novgorod (nôv'gô-rôt). Elsbett did not like to have him go on such a long trading voyage. The only thing that cheered her



This map shows the location of Novgorod, and of Lübeck and some other Hansa towns.

was to hear him tell again and again about the pretty things he would bring back to her from the fair.

"I will bring you enough soft marten skins to trim a beautiful new cloak and cap, and a necklace of golden amber," her father said as they walked to the wharf. "And perhaps I will bring you enough pink silk for a new dress."

Soon they reached the wharf, and Hans kissed his wife and little daughter good-by. The merchants and sailors went aboard their ships. Elsbett and her mother and the other townsfolk climbed to the top of the city wall to wave good-by. The oarsmen, helped by the wind and sails, rowed the ships out of sight. Then the people walked back to their homes.

Steadily the ships of Hans von Zuhlen sailed through the waters of the Baltic Sea. Day and night the sailors and captains kept careful watch. Pirates often attacked merchant ships, and the sailors had to be ready to defend themselves. Ships from other Hansa towns joined the ships from Lübeck. They traveled together to help protect one another.

The Hansa towns worked together to make it safe for their merchants to trade. They helped to make good trading laws. They made it easier for towns to trade among themselves, and they started shops where candles, cloth, and leather were made. Markets were started in the cities of northern Europe.

The ships of Hans von Zuhlen and his companions were now journeying to the market in the city of Novgorod. Novgorod is in what is now Russia. The ships were carrying tin, tapestries, woolen cloth, and fish to Novgorod and other cities. They hoped to get furs and wax and amber from the cities along the Baltic shores. In the markets of Novgorod they hoped to find not only furs, but also Chinese silks, pearls, and spices brought there from the countries of the Far East.

The weather was fine most of the time, and the sailors worked well. Good fortune was with Hans von Zuhlen on this trip to Novgorod. Except for a few short storms and one pirate ship which his men were able to drive away, they found fair sailing and good trading all the way to Dorpat. At Dorpat they had to leave their ships and carry their goods overland. From Dorpat to Novgorod the roads were rough, sometimes blocked with fallen trees, and in some places very swampy. However, the men were so eager to get to market and back home before winter set in, that everyone worked willingly, clearing the roads and carrying the baggage.

At Novgorod Hans and his companions sold all the goods they had brought with them. They filled their chests again with the fine things that the merchants of Novgorod had to sell. Then they started



AT THE FAIR IN NOVGOROD, in the middle of the fifteenth century
(that is, about 1450).

back home, trading again with the cities which they passed along the way.

Steadily the ships sailed through the Baltic Sea toward Lübeck. As they neared home the sailors kept careful watch for the harbor. On the walls of Lübeck the townsmen kept careful lookout for the ships. Elsbett and her mother were often among those watching for the returning ships. Elsbett had not forgotten what her father was going to bring her, but most of all, she wanted to see her father himself. Every day she hoped to see his ships.

Finally, one day, the ships of Hans von Zuhlen came into sight. There was great rejoicing in the city when the merchants and sailors landed. When

Elsbett saw her father she clapped her hands for joy. From the gate, she and her father and mother walked together to their home. When nearly home, Elsbett said, "Father, did you remember my gifts?"

"Did my little Elsbett remember to be a good girl while I was gone?" asked her father, with a merry twinkle in his eye.

"Yes, indeed she did," answered Elsbett's mother.

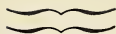
"Then," said her father, "you shall have the softest marten skins, the most beautiful amber necklace, and the finest pink silk on the ships of Hans von Zuh lens."

A Map Game

You have not played the Map Game (page 105) for a long time. You have learned so many new ideas about which you can ask questions, that it should be more interesting than ever. Prepare several questions from the stories in this Unit to ask your classmates about the map.

Bulletin Board

What pictures can you find for the Bulletin Board about the lands where Hans von Zuh lens lived and sailed? Can you find pictures of the things he bought and sold?



Trading Around the World



Ewing Galloway

HARBOR OF GENOA as it looks today. In 1453 the only ships seen there were sailing ships.

One day in the year 1453 some traders were standing on the wharf in the harbor of Genoa. A ship had just arrived with a rich cargo from the East. Along with the cargo, however, the ship brought some very bad news. The city of Constantinople had been captured by the Turks!

Why was the capture of Constantinople bad news for the traders of Europe? Usually the Italian and Hansa merchants did not go to the rich countries of the East. Instead, they bought many of their goods in

the markets of the Arab merchants. The Arabs brought the products of the East to the cities of Antioch (ăn'tî-ök), Alexandria, and Constantinople. As years went by, fierce tribes of Turks began to come from central Asia. They often robbed the Arab traders. Year after year, the Turks grew stronger. Now they had captured Constantinople.

"Who knows when the Turks will capture Antioch and Alexandria?" said a troubled Italian merchant.

"If that happens, the Arab merchants will not be able to bring any goods from the markets of the East," said a Hansa trader. "If we cannot get the products of the East, much of the trade of Europe will have to stop."

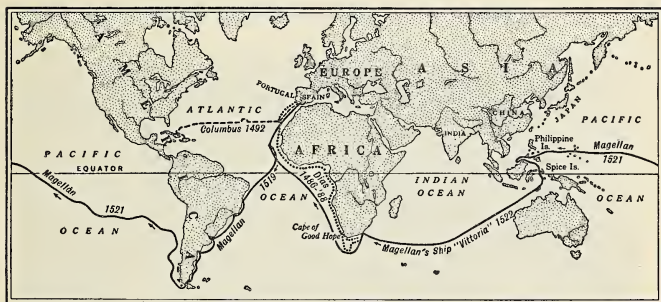
"Even now the slow-moving caravans do not bring enough goods to supply us," said another merchant.

"We shall have to go ourselves to the countries where the Arabs buy these fine goods," said a Portuguese (pôr'tû-gēz) sailor. "We can do so if we can find a new way, or trade route, to the East."

"You Portuguese have been trying for a long time," said an Italian merchant, "but so far you have not found a new trade route to the East."

A new trade route to the East! Yes, the Portuguese had been trying to find one for a long time, but no one had succeeded. Prince Henry of Portugal believed that by sailing around the continent of Africa

one could reach India. So he sent ships south along the African coast. One ship after another went, and each sailed a little farther than the one before it. For many years, however, none of them went to the farthest end of the African continent. Finally, after Prince Henry had died, Bartolomeu Dias (dē'ās),



ROUTES OF DIAS, COLUMBUS, AND MAGELLAN

in the year 1488, sailed around the farthest point of Africa. The Portuguese named the point the Cape of Good Hope, for now it looked as if they really could reach India.

In those days, the people of Europe still had much to learn about the earth. Most of them thought the earth was flat. They thought that if a ship ever reached the place where the sky seemed to touch the sea it would fall down into a bottomless pit. A few sailors were wiser than to think such things. One of them was Christopher Columbus. Columbus

believed that the earth was round and that if he could sail far enough westward, he would come to Japan, China, and India. If he could cross the Atlantic Ocean, Columbus was sure he would find a new route to the East.

You know the story of the voyage of Columbus. You know that the queen of Spain gave him three



COLUMBUS AT THE COURT OF THE QUEEN OF SPAIN

small ships, sailors, and food for the journey. You know that the ships sailed westward across the Atlantic for more than a month before the frightened crew saw land. You know, too, that instead of finding a new trade route to the East, as he thought he had done, Columbus had really reached a New World,

which later was named America. Although Columbus did not find a new trade route to the East, his journey was very valuable. It proved to the people of Europe that they could cross the Atlantic Ocean, and other explorers soon did so.

People did not know how large America was. The king and queen of Spain laid claim to nearly all of the New World. Spanish explorers went to Mexico, Peru, and other parts of America. The Spaniards conquered the people living there, and called the land "New Spain." Many Spaniards went to live in New Spain. Soon a lively trade was started between Old Spain and New Spain. Back and forth across the Atlantic Ocean the Spanish ships, called "galleons," sailed, carrying goods and ideas.

In 1519 an explorer named Magellan (mă-jěl'ăn) left Spain with a fleet of five ships to search for a trade route to the East. He went around the South American continent, and across the Pacific Ocean as far as the Philippine Islands. Magellan died in the Philippine Islands, and some of his ships were lost. But one of his ships, the *Vittoria*, continued sailing westward. After loading the ship with valuable spices at the Spice Islands, the crew sailed it across the Indian Ocean to the Cape of Good Hope. Then along the western coast of Africa they came, and back to Spain, the land from which they had



MAGELLAN'S SHIP THE VITTORIA, the one that sailed around the world, as shown on a very old print.

started. They had proved that the world is round by really sailing around it!

In 1498, ten years after the Portuguese had reached the Cape of Good Hope, one of their ships sailed around it and found the way across the Indian Ocean to the rich countries of the East. At last the Portuguese had found what they had been looking for, a new trade route to the East! Now, no matter what the Turks might do, trade between Europe and the East would not stop, for the Portuguese traders could go to the markets of the East themselves. Many of

their ships were busy sailing back and forth between Portugal and the East.

The Portuguese also found the large country in South America which they called Brazil. Soon some of the Portuguese trading ships were carrying goods back and forth across the Atlantic Ocean.

Other countries besides Spain tried to find a way to the East by sailing westward. England, France, and Holland tried to find a route to the East by sailing through North America. England sent John Cabot to explore the northern shores. France sent Verrazano (vē-rät-sä'nō) and Cartier (kār-tyā'), and Holland sent Henry Hudson. None of the explorers found a route to the rich countries of the East. They learned, however, that North America was a very large continent, that it had many good rivers, that the forests were filled with very good lumber, and that the land was fertile. Soon people from England, France, Holland, and other countries of Europe came to live in North America. Just as trade started between New Spain and Old Spain, trade began between the countries of Europe and North America.

After all, how little the traders had to worry about, when the Turks captured Constantinople! Because the people of Europe wanted the rich products of the East, they made up their minds to find some

new way to get them. As they searched, they found new ways to the East. They discovered new lands, new people, and new things to trade. The trade of Europe did not stop. Instead it grew larger. The people of Europe no longer traded only with themselves and the Arabs, but they began to trade around the world.

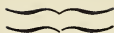
For many hundreds of years, as you know (pages 391–392), the large ships used in trade were sailing ships, moved by the wind. But when steamships came into general use, many of them were made much larger than sailing ships, and could move much faster. Most of the trade across oceans today is carried on with steamships that make regular trips on regular routes.

A Picture Map

Make a picture map which will tell where the trade routes of the Arab merchants were, what goods they carried, and how they carried their goods.

Using the Map

On a map of the world trace the routes of all the explorers mentioned in this story.



Goods and Ideas from Everywhere

Trading is one of the most important things men do. In primitive times, when people first began to exchange goods and ideas, they began to make their ways of living better. As people learned to build boats and make wheels and build roads they were able to carry goods and ideas farther and farther.

Today trading is carried on all over the world. In our country there are thousands of miles of railroads and thousands of miles of concrete roads. Trains and automobiles and trucks and airplanes carry goods and ideas from one part of the country to another. There are busy ships on all our large lakes and deep rivers. Huge steamships travel from our harbors to nearly all the countries of the world.

Have you ever thought where all the things you use and the ideas you have come from? The foods you eat are grown in many places. The clothes you wear come from farms and factories. The songs you sing and the games you play come also from many countries. This book you are reading is made of paper and ink and cloth which have traveled long distances to reach you. The stories you have read have brought you ideas from all over the world.



Courtesy South African Railways

LOADING AND UNLOADING SHIPS IN WORLD TRADE, at a port in South Africa.

One of the most important ideas you have learned is that exchange of goods and ideas helps to make our ways of living better.

Reading Time

Here are some books in which you can find stories that tell how money and writing help men to exchange goods and ideas:

Lipman, Michael, *Pictures for the King*, and *Letters for the King*.

Unit Study Books, No. 606: *Money*.

You can find out about the story of writing on pages 96-104 of Knowlton and Gerson's *Our Beginnings in the Past*, and pages 138-144 of Lansing's *Man's Long Climb*.

On pages 197-203 of Carpenter's *Ourselves and Our City* there are stories about money of long ago and of today.

Many people have become great traders, helping to exchange goods and ideas in different parts of the world. Here are some books that tell stories about great trading peoples and the growth of trading:

Barton, Blake, *Merchant Adventurers*.

Camp, Ruth O., *The Story of Markets*.

Luther, Agnes V., *Trading and Exploring*.

Unit Study Books, No. 401: *Vikings*.

Unit Study Books, No. 406: *Beginnings of Trade*.

Unit Study Books, No. 601: *World Trade*.

Talking Time

When the class talks about exchanging goods and ideas, you may want to tell stories from Blake Barton's *Merchant Adventurers*. On pages 7-18 he tells of "Abdath of Phoenicia"; on pages 19-31 there is a story "Merchants of Venice"; on pages 34-43, you can read about "Gilbert of Lübeck"; the story "Jan Hutman of Holland" is told on pages 46-56; and the last story, "*Cutting Sark, the Last of the Clipper Ships*," is a story of the days when beautiful American clippers were among the fastest carriers of goods and people on the oceans of the world.

On pages 28-61 of *Trading and Exploring*, Agnes V. Luther tells a story of the Phoenicians; on pages 62-87 she tells of the Venetians; and on pages 203-240, of the Dutch. She tells also stories about other trading peoples of history; on pages 9-27 she tells a story of trade in ancient Babylonia; on pages 88-147 she tells of the Norsemen whose trading and exploring carried them to America almost 500 years before Columbus; and on pages 148-202 there is a story about Portuguese traders and sailors.

Ask the librarian to help you find other books that tell how people have learned to exchange goods and ideas everywhere.

What This Book Has Told Us

At the beginning of this book Peter and Jane were visiting on their Uncle Mark's farm. Then they went back to their home in the city, and started to school again. All through the autumn and winter and spring they went to school, reading stories and talking with the other boys and girls.

What are the things Peter and Jane have learned since we have known them?

First, from the visitors on History Hill they learned how some of our ways of living have come from the past.

Second, the globe seemed to tell them that some of our ways of living come from the earth we live on.

Third, when Peter and Jane studied about groups they learned that part of our ways of living come from the groups we belong to.

Fourth, Miss Tyler's class read stories telling that farming was the first big step toward civilized ways of living, and that we owe a great debt to the farmers of all the ages.

Fifth, men have learned to make tools, and to use tools in making all kinds of goods. Because people have learned to make so many things, our ways of living are much more comfortable than those of primitive men.

Sixth, when people learned how to grow crops and make goods, they began to exchange goods and ideas with one another. Ever since then people have traded goods and ideas. Today the things we use day by day come to us from all over the world. Exchanging things helps very much to make our ways of living.

Make Lists of

The most important ideas in this book.

The most important people named in the book.

The most important places named in the book.

When Were

Primitive Times? Ancient Times? The
Middle Ages?

Where do our Ways of Living come from?

Index

The pronunciation markings used in this book are: *ā* in *fāte*, *ǎ* in *vācation*, *ǎ* in *căt*, *ǎ* in *madǎm*, *ǎ* in *fār*, *â* in *dânce*, *â* in *sofâ*, *â* in *câre*; *ē* in *mē*, *ē* in *rēturn*, *ē* in *mēt*, *ē* in *momēt*, *ē* in *uppēr*; *ī* in *fine*, *ī* in *pīn*, *ī* in *charīty*; *ō* in *bōne*, *ō* in *ōbey*, *ō* in *nōt*, *ō* in *cōnnect*, *ō* in *ōrder*, *ōō* in *mōon*, *ōō* in *fōot*; *tū* in *fortune*, *ū* in *ūse*, *ū* in *ūnite*, *ŭ* in *ŭp*, *ŭ* in *circŭs*, *û* in *ûrge*.

*Names of make-believe persons given in this index, with pronunciations, are marked with a star; for example, *Ankem, *Dauuf, *Guti, *Pepy, *Tora.

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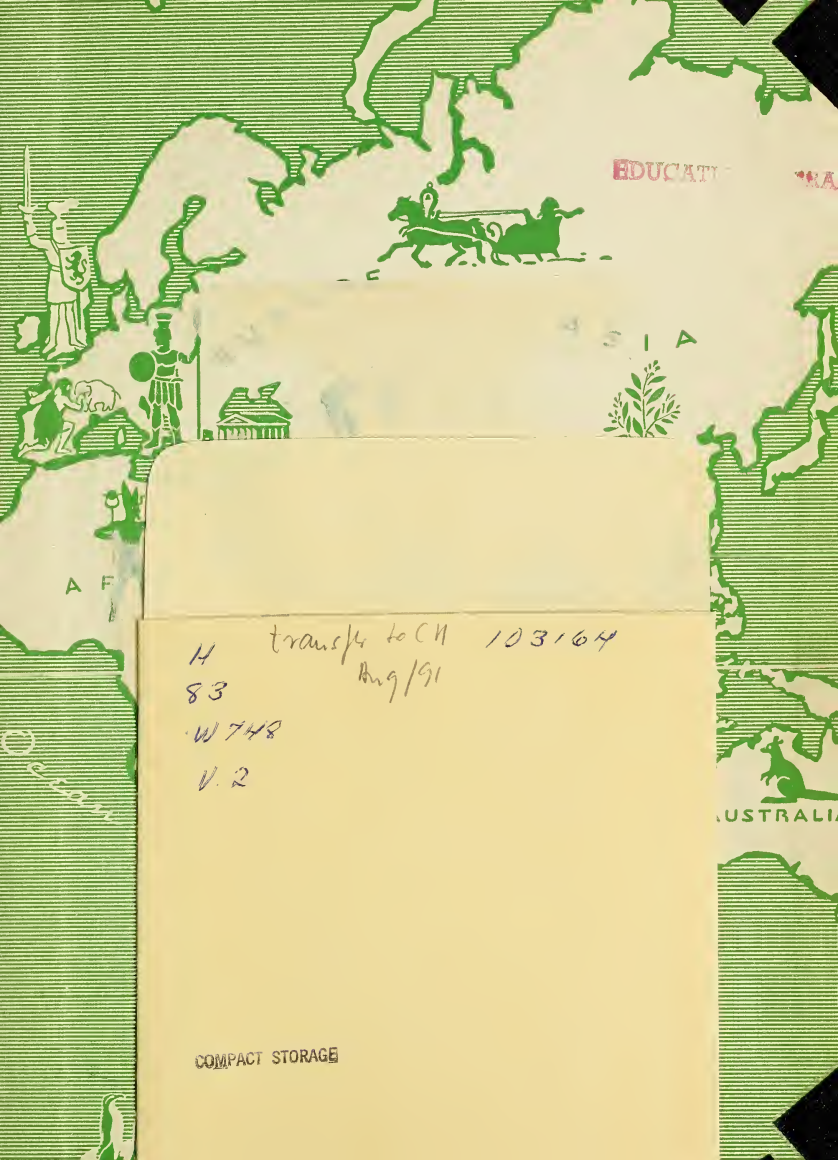
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